ARCHAEOLOGY IN NEWFOUNDLAND & LABRADOR 1982

EDITED BY
JANE SPROULL THOMSON
CALLUM THOMSON

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HISTORIC RESOURCES DIVISION
DEPARTMENT OF CULTURE, RECREATION & YOUTH
GOVERNMENT OF NEWFOUNDLAND & LABRADOR

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ARCHAEOLOGY IN NEWFOUNDLAND & LABRADOR 1982

Annual Report #3

Edited by: Jane Sproull Thomson
Callum Thomson

Historic Resources Division
Department of Culture, Recreation & Youth
Government of Newfoundland & Labrador
St. John's, Newfoundland
May 1983

Cover photo by Antonia McGrath; Astrolabe dated 1628
recovered by W. Mushrow from the Isle aux Morts shipwreck
(see Newfoundland Marine Archaeology Society, p. 195)

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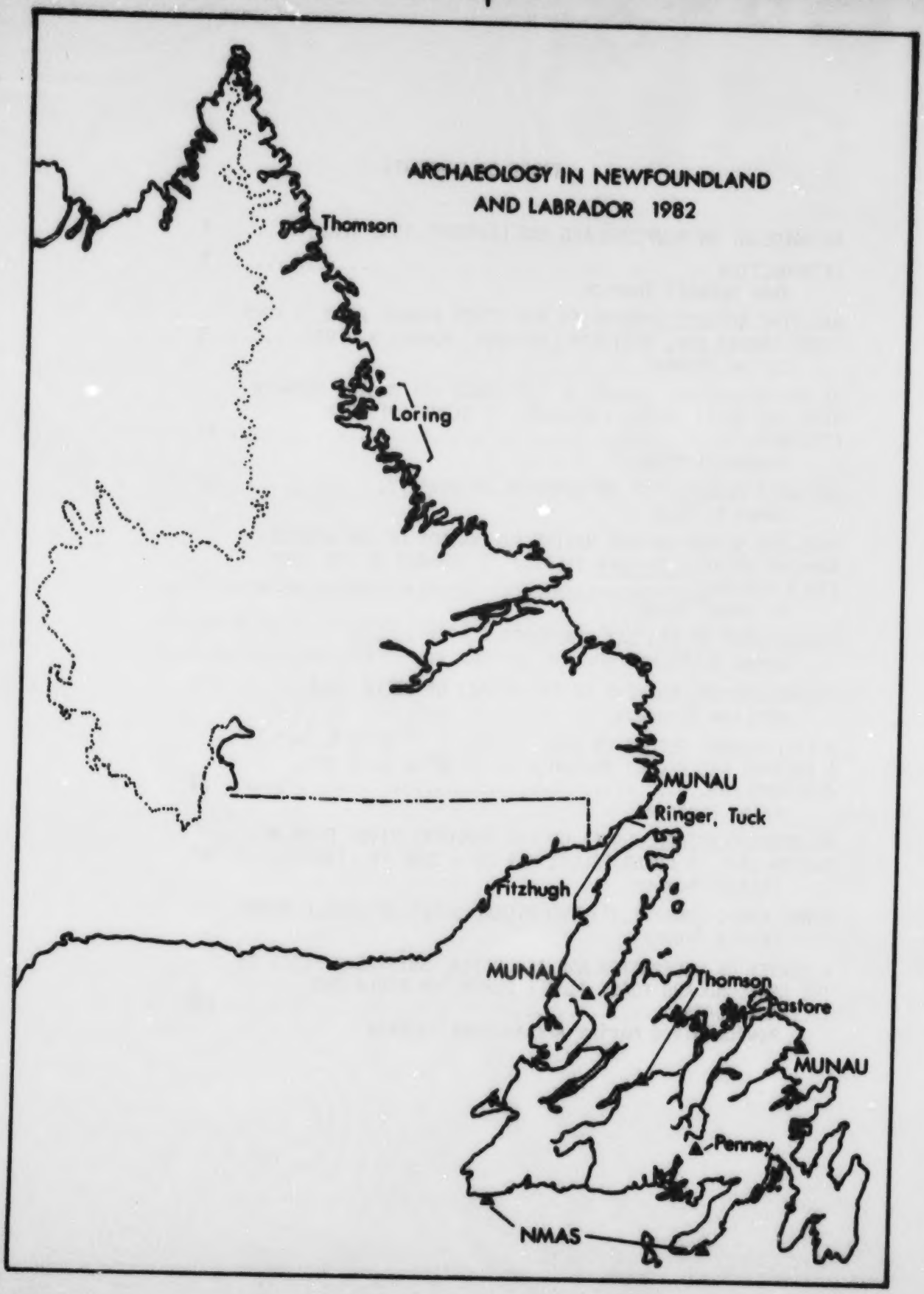
ARCHAEOLOGY IN NEWFOUNDLAND
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INTRODUCTION

Jane Sproull Thomson
Provincial Archaeologist

1982 was in some ways a year of consolidation for archaeological research in Newfoundland and Labrador. Research begun over the past several years was continued, with broadened areal studies and/or expansion of excavations, or, in some cases, more in-depth study of sites previously identified as potentionally important. Among those returning to particular areas of research were Fitzhugh, Loring, Pastore, Penney, Thomson, Tuck and the Parks Canada team at Red Bay.

The Canadian Archaeological Association Annual Meeting held in April of 1983 saw a special session on Palaeo-Eskimo Prehistory of the Newfoundland-Labrador-Ungava region. Utilizing the results from the many recent small-site excavations in this region, Richard Jordan, Douglas Robbins, James Tuck and William Fitzhugh gave papers interpreting the prehistory of this tradition more broadly than previously has been considered possible. At a time when funding for archaeology is under increasing public scrutiny, such interpretive studies, which make the science more accessible to the community supporting it, are arguably a priority.

The past year also saw the founding of the Newfoundland and Labrador Amateur Archaeology Association. The aims of the Association include the furthering of public understanding of and interest in archaeology. (The first president is Mrs. Julia Mathieson and the address is P.O. Box 8214, Stn.A, St. John's, Newfoundland, A1B 3N4.) The Association has already become an important forum for distribution of research results and exchange between the academic archaeologist and an interested public.

Several new programs were undertaken during the past year to narrow the gap existing between these two groups. A pamphlet titled "Archaeology in Newfoundland and Labrador" was distributed to tourist outlets, schools and museums in the province. It is an attempt to explain concisely the goals and methods of archaeology, some of the prehistory of the province, and to make known key sections of the Act Respecting Historic Objects, Sites and Records. As well, a course was run at the St. John's YMCA titled "Introduction to Archaeology", whose purpose was to attract more widespread participation in archaeological objectives among the more committed lay public.

The award for "surprise of the year 1982" must be divided between two equally exciting sites. At Red Bay, James Tuck's discovery of unburied human remains not far from the land site is reported in this volume. Of a different nature, the recovery by a professional diver of a nearly mint condition astrolabe dated to 1628 has brought international attention to the site at Isle aux Morts. (See the report, this volume, by the Newfoundland Marine Archaeology Society, as well as the cover illustration; we have been fortunate indeed in finding eye-catching artifacts over the past three years to grace the cover of this publication!) This site holds much promise, although as always the excitement generated over its discovery brings with it corresponding concern for its safety from artifact collectors.

Thanks is again expressed to the contributors to this volume. Its somewhat tardy appearance this year reflects government budgetary restraints and is in no way attributed to them; as always they responded rapidly and enthusiastically to the call for papers.

Finally, thanks are due once again to the Division secretaries, Kay Hillier and Karen Walsh, who handled the typing of the manuscript while somehow managing to satisfy a multitude of bosses.

Grants awarded by Historic Resources Division for the 1982 field season are as follows:

NAGLE, Christopher - Fleur de Lys analysis.....	$ 500.
NEWFOUNDLAND MARINE ARCHAEOLOGY SOCIETY - survey.....	14,000.
PASTORE, Ralph - Beothuk Project.....	8,155.
PENNEY, Gerald - "Burnt Knaps"; Conne River.....	3,850.
THOMSON, Callum - Shuldham Island.....	5.700.
TUCK, James - Red Bay.....	7,700.
TOTAL....	39,905

MARITIME ARCHAIC LONGHOUSES AND OTHER SURVEY RESULTS FROM OUTER SAGLEK BAY, NORTHERN LABRADOR, AUGUST 1982.

Callum Thomson
Memorial University of Newfoundland, Anthropology Department

INTRODUCTION

Following initial work by Tuck in 1969-71 (Tuck 1975) and surveys by the Smithsonian/Bryn Mawr Torngat Archaeological Project (T.A.P.) (Fitzhugh 1980) in 1977-78, field research undertaken in the present project in Saglek Bay, northern Labrador, (see map, p.1, this publication) during 1980 and 1981 produced new evidence at Shuldham 9 of a very late occupation of this region by Late Dorset Eskimos. A small part of this site, occupied perhaps as late as 500 B.P. by Dorset people, was investigated during these two field seasons, and was found also to contain evidence of occupation by earlier Palaeo-Eskimos, Thule Eskimos and the ubiquitous Labrador Inuit. A few artifacts hinted at the additional presence of Maritime Archaic and Point Revenge Indians (Thomson 1981b; 1982a).

In 1982 a two week field season aimed at completing excavation, mapping and testing at Shuldham 9, investigating one of two small Thule sod houses found in 1981, and conducting surveys in the outer part of Saglek Bay, particularly in potential areas of occupation by Maritime Archaic (MA) Indians. Tuck (1975) and Fitzhugh (1980) had already demonstrated the existence of late MA people this far north; following an introductory course in MA longhouse/scattered boulder differentiation the previous year at Aillik, I hoped to be able to locate some of these structures in unsurveyed and previously surveyed areas, thus proving an extensive use of the outer part of the bay, rich as it is in a variety of marine and terrestrial food resources. Our surveys concentrated on high gravel and boulder ridges well removed from the present shore line in an attempt to retrace MA-occupied 4000-5000 year old active beaches. At Aillik we had found that MA structures were often difficult to discern because of the now well-camouflaged combination of boulder architectural features on boulder beaches. High, unvegetated terraces often proved to have MA features on them; of these features cache pits were frequently the most visible, leading the eye towards other, larger structures.

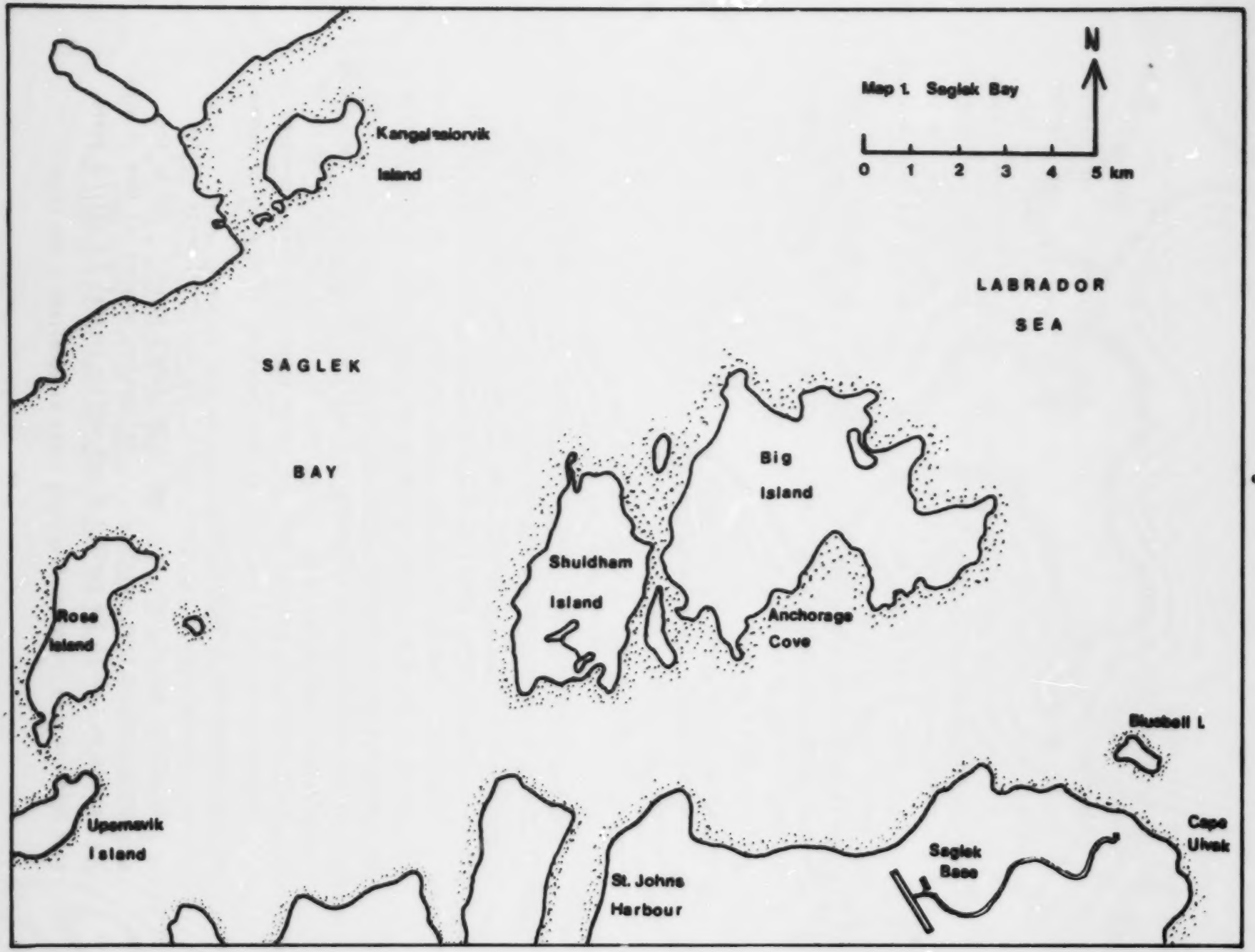
As no MA structures other than the hearths at Rose Island Site Q (Tuck 1975: 43-44) and a pair of pavement structures on Big Island (Fitzhugh 1977-78) had previously been noted in Saglek Bay we were delighted and not a little surprised to find in the course of our surveys three Maritime Archaic longhouse foundations and two pit houses similar to those at Aillik (Fitzhugh 1981b; 1982), and some possible MA tent rings. These discoveries highlighted our work as none of these structure types had previously been recognised north of Nulliak, some 25 km to the south (Fitzhugh 1981a), and supported the contention raised earlier (Thomson 1982b: 2) following the discovery at Shuldham 9 of some MA woodworking tools, that a close connection must have been maintained with the forests to the south for supplies of building materials and most likely other trade items unavailable in the north.

NARRATIVE

Our return to Saglek was once again greatly facilitated by Petro Canada: equipment was transported from St. John's to Saglek by supply boat in July, the container slung by helicopter over the 7 km to Shuldham Island where it remained as an incongruous backdrop to our camp until its removal in September; our crew assembled in Goose Bay and joined Petro Canada's Convair on August 5th for the flight to Saglek. By early evening we had been deposited beside our container, had camp set up and were ready for work. Weather was good on our arrival and remained kind throughout most of the fortnight, permitting a prodigious amount of work to be accomplished.

We were immediately relieved to note that, despite ever-increasing amounts of exploratory, recreational and fishery traffic in the region. the Shuldham 9 site which had produced so rich a variety and quantity of unique soapstone carvings remained undisturbed. It had been feared that this rare expression of Dorset artistic ability might have attracted the unscrupulously curious (Sproull Thomson and Thomson 1981; Thomson 1981a; 1982b).

Our first few days were spent finishing the excavation and mapping at Shuldham 9 of Tent Ring 1, a Late Dorset structure at the north end of the terrace. Most evenings were taken up with boat surveys, when weather permitted, or lengthy walks around Shuldham Island, a 5 x 3 km island in the mouth of Saglek Bay (Map 1). In summer this island is rich in food


N
Map 1. Saglek Bay
0 1 2 3 4 5 km
Kangalasiorvik
Island
LABRADOR
SEA
SAGLEK
BAY
Big
Island
Shuldham
Island
Rose
Island
Anchorage
Cove
Bluebell L
Upernavik
Island
St. Johns
Harbour
Saglek
Base
Cape
Ulvak

resources, with several species of seal, sea birds, ducks and geese, minke whale, arctic hare, lemming, caribou, char, shellfish and ripening berries sighted during our brief stay. Other small whales, foxes, otter and salmon have also been seen in the area at this time of year. During our surveys, we remained constantly on the lookout for a soapstone outcrop but were not successful until one hour before our departure by aeroplane from the Saglek base when the Petrocan housekeeper Bob Toomashie showed us some fine soapstone samples picked up at the top site, the old U.S. radar installation above Cape Uivak. Unfortunately, no time remained in which to visit the site.

One survey area which had promised to have exciting prospects from an ethno-historical viewpoint was Eastern Harbour, Big Island. A late-night visit to an Inuit fishing camp there in 1981 had indicated that this might be one of the locations mentioned by Kohlmeister and Kmoch (1814) during their Mission voyage from Okak to Ungava Bay. However, the six rectangular house foundations on a terrace above the present tent camp seem to date from a more recent period. Structural features were unlike those described by Schledermann for his Late Period (Schledermann 1971); instead, modern materials suggest contemporaneity with the early U.S. occupation of the Saglek base. Another pair of smaller, older sod houses in an adjacent bay was test pitted and resulting information added to a scanty site report from 1970 at the Newfoundland Museum.

This southwest corner of Big Island is extremely rich in historic Neo-Eskimo (Labrador Inuit) tent rings and meat caches, as is the opposing corner of Shuldham Island, confirming the faunal evidence obtained from earlier sites on Shuldham (Kolar and Salter 1982) of a strong reliance on the exploitation of migrating harp seals which pass between the islands. The paucity of Dorset sites on southwest Big Island and the abundance of Inuit structures suggests that the latter people were better prepared for optimum harvesting of the harps in this location, using superior numbers of hunters and, probably, nets.

Another evening was spent visiting the geological party mapping structures out of their base camp in St. John's Harbour. One of the group visiting from Copenhagen, D. Bridgwater, pointed out that we were camped on some of the earth's oldest surface rock at 3.6 billion years,

which put our studies of ancient cultural remains in a new perspective.

August 10th dawned wet and cold, more suitable for survey work than excavation, so we set off for a full day in the Delta, our inflatable boat. We were disappointed but not unduly surprised to find off Cape Uivak that Bluebell Island's Inuktitut name Igukshuak, translated by Reverend Wm. Peacock (personal communication) as "big sod houses", is either a humourous misnomer or was so named as a marker to coastal travellers for the sod houses inside Saglek Bay; the island's near-vertical topography is hardly suited for any residence larger than a bird's nest.

From here we headed north across the entrance to Saglek Bay to the northeast coast of Big Island, not previously surveyed. Our work here was rewarded by the first two of three Maritime Archaic longhouses (IdCq-47; IdCp-23), several MA boulder pits (IdCq-48), an abundance of Dorset tent rings, and two long lines of hopping stones (IdCp-19 to -22). The MA sites were located on boulder beach ridges 14-17m above sea level, while the Dorset structures were situated above bird nesting cliffs and probable walrus haul-out rock shelves. Our trip home against a rising wind and swell was less dry than had been the calm morning crossing; few boats can be wetter than the Delta.

With work almost finished at Tent Ring 1, part of the crew began the excavation on August 11th of a Thule sod house (IdCq-45), where in 1981 we had found a slate end blade in an entrance passage test pit (Thomson 1982a). This house shares a common wall with another similar structure and is located some 400 m inland, above a large pond. When occupied, these houses must have blended in perfectly with the rising ground - they are certainly well camouflaged today - lending substance to the possibility that they were occupied by bashful early Thule immigrants in still-occupied Dorset territory. While in a good location for shelter from winter's north winds their distance from sea and food resources is otherwise difficult to understand.

Late on August 12th we completed our three year survey-circuit of Big Island by returning to a bay on the north coast dismissed after only a cursory examination two years previously as an unlikely prospect, but of renewed interest since a report by Bridgwater (personal communication) of another line of hopping stones above the head of this bay. The bay itself was a challenge to cross with wind, current, tide and high head-

lands each conspiring to produce short choppy waves from all directions. The site(s) extended over a square kilometre and included Labrador Inuit, Dorset and MA remains on successive terraces (IdCq-49 to -51). The hopping stones were a marathon 90 m long, with a turn-around circle at the south end; negotiating the entire 200 m circuit must have required a considerable feat of endurance which we had no inclination to test for ourselves (Plate 3).

Two days later the weather was calm and sunny and seemed suitable for the 15 km run to the north side of Saglek Bay, the mainland coast south and west of Kangalasiorvik Island. This had not been surveyed before and promised to have been extensively settled (as had neighbouring Kangalasiorvik Island (Fitzhugh et al. 1979), due to the strategic location on north-south migration routes for humans and marine mammals, the shelter offered by mountains to north and west and the island to the east, a series of level terraces fronting the sea, availability of fresh water, and abundant wildlife (Brice-Bennett 1977). During our day's survey of five kilometres of coastline, inlets and interior we did not find the extensive MA sites I had anticipated on the higher terraces, although some tantalizing scatters of lithic material suggests that a more rigorous search will prove fruitful. We did find fifteen Maritime Archaic, Palaeo-Eskimo and Neo-Eskimo sites (IdCr-25 to IdCr-39), witnessed a great variety of marine and terrestrial food resources, and enjoyed the unaccustomed proximity of mountains rising to 1100 m.

The following day being Sunday we took our only day off to relax, catch up on journals, field notes and survey forms. The next day we managed to finish off the Thule house and begin the task of backfilling before one of our crew, Eric Loring, departed with a group heading north to climb in the Nachvak region. In return we received a generous chunk of caribou meat and wondered, momentarily, who had the better end of the deal.

Our last full day was very busy, with two of the crew remaining on Shuldham to map the Thule house and begin packing while the other two returned to Big Island to map the MA longhouses. En route back across the island we came across a third longhouse at the head of Saglek Bight (Anchorage Cove), an area previously surveyed in blinding rain by the T.A.P. This structure, surrounded by cache pits, was clearly defined

on a 7 m a.s.l. boulder beach ridge. We wearily sketched and photographed the house and headed home after a 30 km hike which had seemed to be all uphill.

Wednesday August 18th saw the backfilling finished and by mid-afternoon we had the camp packed up and were standing by for the return of the Petrocan helicopter which arrived on schedule to transport us back to the Saglek base. The following day members of a CBC film crew arrived from St. John's and expressed a wish to see a few archaeology sites so, in the couple of hours remaining before our flight departed for St. John's, we returned to Shuldham 9 and Saglek Bight, finding some diagnostic artifacts at the latter site's MA longhouse. Our buoyant return to the base was somewhat deflated when a sunker suddenly halted the boat, while I continued forward into Saglek Bay clutching grapnel, camera and field radio.

EXCAVATION AND SURVEY RESULTS

Shuldham 9 IdCq-22 This year we completed work at this extensive and complex site by finishing the excavation of Tent Ring 1, mapping and testing the site and backfilling all excavated structures. We were pleased to note that the areas already backfilled in previous years were showing healthy signs of re-vegetation.

Tent Ring 1 is a D-shaped structure measuring nine metres in length and 4-8 m in width. The floor is partially paved with small, eroding stone slabs; the outer wall is comprised of a single row of lichen-covered hold-down rocks protruding through a thin, discontinuous covering over beach gravel of moss, grasses and low-growing berry plants. The cultural layer is 5-10 cm thick, mixed in with or surmounting the gravel. An entranceway faces east, overlooking the bay; several hearths and concentrations of charcoal and burned grease suggested multi-family use of this large structure or repeated occupations of the location.

While a large percentage of the diagnostic artifacts recovered are Late Dorset, interpretation is being complicated (inevitably, on this terrace) by the presence within the structure of Middle Dorset and Groswater Palaeo-Eskimo tools, a Middle Dorset radiocarbon date on burned wood of 1690±70 B.P. (Beta 3818), a few badly corroded fragments of iron and other Neo-Eskimo artifacts,and a Late Dorset Ramah chert triangular point with tip fluting on the ventral side, clearly a

transitional stage between Late and Middle Dorset (Plate 4a).

As reported elsewhere (Fitzhugh 1980; Thomson 1981b; 1982 a), the Shuldham 9 site has seen repeated occupation by Palaeo- and Neo-Eskimo for at least two thousand years, and perhaps also by Maritime Archaic and Point Revenge Indians. However, the site's low elevation of 4 m and the battered condition of the MA ground slate woodworking tools presents the additional possibility that the MA artifacts were transported here from another site. The finding of two small Point Revenge endblades in Late Dorset context suggests, among other possibilities, that these people visited the site en route to the Ramah chert quarries 50 km to the north or that the tools were brought north from Point Revenge territory in central Labrador by Late Dorset traders.

Maunder site (Shuldham 15) IdCq-45. The easternmost of two adjoined sod houses at this site was tested in 1981 (Thomson 1982a). The only artifact found at that time was a small ground slate endblade. This tool, the seeming paucity of cultural material, the size, depth and architectural features seemed to attribute a Neo-Eskimo rather than a Dorset occupation of this house. In 1982, we completed the excavation.

It soon became evident that the house had suffered from more than usual disruption after abandonment; paving slabs were clearly missing from the rear sleeping platform, floor and entrance passage. The interior measured approximately 4 x 3 m, with a two metre long entrance passage sloping down to the east. The rear and one side platforms were elevated by banked sand and stone pedestals some 30 cm above the living floor. The entrance passage was paved, its walls lined with upright rocks and the roof covered with flat slabs, some of which remained in place.

Large amounts of burned and unburned wood fragments were found above the house paving, suggesting that the roof had been supported and perhaps lined with wooden beams and rafters. Fallen rocks in the house corners had probably supported these roofing members, giving additional headroom. The house floor had been excavated some 50 cm below the present wall crests, which rose 20 cm above grade.

Five artifacts were found in the house, entrance passage and midden area, including a miniature soapstone vessel, two pieces of ground slate and two Ramah chert microblade fragments. In addition, several chert

and quartz crystal flakes were recovered. In an uncommon spirit of stratigraphical co-operation, the Neo-Eskimo artifacts were located on the house floor, while most of the flakes and microblade fragments were found in buried sod or sand several centimetres above the floor, suggesting that they had been carried inadvertently into the house in wall or roofing sods from a previous Dorset deposit.

It would seem that this house had been built and occupied by early Neo-Eskimos, perhaps during the latter stages of the Dorset decline. An accidental fire inside the house may have resulted in the destruction of the roof and abandonment of this structure, perhaps in favour of the second house built alongside, using a common south wall. Some of the original paving slabs might then have been re-used. It is hoped that dating of charcoal samples will clarify the occupation period.

A total of twenty-eight new sites were recorded on Big Island and Kangalasiorvik Island; one site previously found ca. 1970 but with no details on file at the Newfoundland Museum was recorded. Each site's type, elevation and cultural affiliation is briefly summarized below, with general details following each site cluster. Locations are restricted to the site reports, on file at the Newfoundland Museum.

Big Island East 1 IdCp-17 This site consisted of eight Labrador Inuit tent rings and one cache with a scattering of Dorset lithic material on beach ridges five and seven metres above a bay on the east side of Big Island. The tent rings included one interesting miniature structure less than 2 m in diameter, complete with sleeping platform and paving, possibly built for a child or some isolation purpose.

Big Island East 2 IdCp-18 Two tent rings and two cache pits were found on the highest boulder field 70 m a.s.l., with a fine view to the southwest, between a southeastern bay and Saglek Bight. Lithic material included white quartzite and slate flakes. The site is tentatively identified as a Maritime Archaic caribou-lookout station.

We had erroneously assumed that these two sites had previously been recorded by members of the T.A.P., who had recorded one site in between these two, so we spent a minimal amount of time here. The lower, Labrador Inuit/Dorset site was probably located for exploitation of walrus and seal, and perhaps bird-nesting on the adjacent 300 m cliffs, while the

MA site overlooks a plain frequented during our visits by a small group of caribou. The high elevation and 500 m distance from the sea suggests exploitation of these land mammals rather than marine resources as the principal focus of this site. The presence of quartzite rather than Ramah chert indicates some antiquity, i.e. prior to the period of almost exclusive use of Ramah chert in the mid 5th millennium B.P. (cf. Tuck 1975: 97).

Big Island East 3 IdCq-47 A single Maritime Archaic longhouse and three cache pits were found on a 14 m a.s.l. beach ridge above a barachois at the northeast corner of Big Island. The 17 x 7 m house was divided into four linear segments or rooms with post foundation supports in the corners and at the partitions. The interior was comprised of large cobbles; the walls were outlined with raised cobbles and boulders. No cultural material was visible.

Big Island East 4 IdCq-48 Two MA-like boulder pit houses and three cache pits were located 100 m northeast of IdCq-47 at the same elevation; diameters of these completely subterranean structures ranged from 1.5 to 4.0 m, depth from 0.5 to 1.0 m. The interiors were lined with vertically set boulders; no lithic material was found (Plate 1).

These two sites are similar in elevation, size and location and are set in a similar boulder matrix to those at Aillik, near Makkovik on the central Labrador coast. The lack of artifacts also seemed typical, although the large interstices among the floors' boulders are capable of absorbing a huge amount of lithic debris. The longhouse was the first that we found in Saglek and only became evident when we began to search in the vicinity of the more-readily seen cache pits, so well does it blend in with its surroundings. Fitzhugh has theorized that the choice of boulder fields rather than more comfortable vegetated terraces for central Labrador structures could be attributed to a winter occupation period when small groups might find it easier to move boulders than dig house foundations through frozen sand terraces (Fitzhugh 1981b:7). This would accord well with the choice of location of the Big Island pit houses and longhouses on the outer edge of Saglek Bay, close to the sina, the winter ice edge, and with Tuck's contention that MA people remained in the bay from at least early winter until late summer (Tuck 1975: 99-101).

Big Island East 5 IdCp-19 This small site is comprised of a Middle Dorset tent ring on a clifftop ca. 15 m a.s.l., 800 m east of IdCq-48, near the tip of the peninsula.

Big Island East 6 IdCp-20 Five Dorset tent rings with a possibly-associated 20 m line of hopping stones were located ca. 15 m a.s.l., 50 m east of IdCp-19; some Late Dorset material was included amongst the Ramah chert present in all five structures.

Big Island East 7 IdCp-21 A 30 m line of hopping stones was found on a plateau above and south of IdCp-19, ca. 20 m a.s.l. This site has a magnificent view north to the Torngats and Ramah Bay, possibly intended to throw competitors off their balance.

Big Island East 8 IdCp-22 A mixed surface scatter of Palaeo-Eskimo and Labrador Inuit artifacts ca. 15 m a.s.l. was all that we could find of this site located between IdCp-19 and IdCp-20.

Big Island East 9 IdCp-23 This second Maritime Archaic longhouse and associated cache pit is at the 17 m level, 300 m southwest of IdCp-19 on a flat, eroding shale terrace. The house foundation is segmented into four rooms and measures 11 x 4.5 m. Walls are raised slightly above grade with gravel and boulders; two Ramah chert flakes were found in a quick survey of the interior (Plate 2).

These five sites are located on the north side of a peninsula which has bird nesting cliffs on the eastern tip and flat rock shelves on the north side which might have been used by walrus as a haul-out area. In winter the land-fast ice edge, the sina, runs close to this shore and would have provided large quantities of marine food resources.

Big Island East 10 IdCq-49 We found four Labrador Inuit tent rings on the first terrace ca. 15 m above the east side of one of Big Island's northern bays. Woodchips in the interior of some of the structures indicates fairly recent use. The terrace edge is being actively eroded.

Big Island East 11 IdCq-50 Three tent rings, one paved area and a 90 m long line of hopping stones (Plate 3) provide an interesting mixture of cultures for study on this second terrace, above IdCq-49 at 25-28 m a.s.l. Black chert, Saglek quartzite and Ramah chert flakes and artifacts, including one MA nipple-based biface (Plate 4c) indicate both MA and

Palaeo-Eskimo occupation.

Big Island East 12 IdCq-51 On the third terrace above this bay we found two tent rings and a fox trap at about 35 m above sea level. Ramah chert flakes could indicate either Palaeo-Eskimo or MA occupation.

These three sites are alone on an otherwise unsettled, preciptious and very exposed north coast. The boulder beach below the site, after a wild approach across the bay, is steep and does not afford a good boat landing. However, it might be more readily attained over ice, and the view from terraces across the bay and north up the Torngat coast certainly has its compensations. A diagnostic MA biface, abundant Ramah chert and preservation of wood indicates that people have made sporadic use of this bleak location for some four thousand or more years.

Big Island 9 IdCq-54 Our third Maritime Archaic longhouse foundation and four cache pits are located on the third boulder terrace above the present beach on the north side of Saglek Bight, at 7 m a.s.l. (Plate 5). Quartzite artifacts and flakes were found in the interior of the house, which measures 13 X 4 m and is divided into three segments. A possible entranceway faces south over the bay. This structure has excellent potential for investigation.

This longhouse has a number of most interesting features including its low elevation, exclusively quartzite lithic material and the presence of a Palaeo-Eskimo-like tool. Initial impressions, later discarded, were that this longhouse was constructed following the appearance of Pre-Dorset people on the north Labrador coast, which temporarily could have occasioned the loss of access to the Ramah chert quarries and a return to the use of locally available quartzite. However, the paucity of early Palaeo-Eskimo sites north of Hebron and the Pre-Dorset disdain for Ramah chert makes this unlikely. The Palaeo-Eskimo-like tool is a single-shouldered biface (Plate 4d) more reminiscent of Sarqaq material from Greenland, than eastern Canadian tools (c.f. Fitzhugh 1972). One similar point was found at the Groswater Bay Sandy Cove 2 terrace blowout dated typologically at ca. 4800 B.P. (ibid.: 92,288), but until more tools of this singular type are found on the Labrador coast it would be unwise to suggest for now that this style is any more than accidental. The low elevation of the Big Island site seems

within the acceptable range of uplift for this outer part of the fjord, where ice cover was limited or non-existent during the last glacial period (Bob Rogerson 1983: personal communication). From this and other evidence discussed below, an occupation date between 5500-4500 B.P. would seem reasonable.

Kangalasiorvik Bay 1 IdCr-25 This site is a single recent tent ring at the head of an active beach on the north coast of Saglek Bay at 3 m a.s.l.

Kangalasiorvik Bay 2 IdCr-26 Two Labrador Inuit tent rings were discovered just above the active beach/rock shelf; some Middle Dorset lithic material was seen eroding from a bank at the back of the first beach ridge at 4 m a.s.l. Heavy caribou traffic is aiding the erosion.

Kangalasiorvik Bay 3 IdCr-27 This Labrador Inuit campsite is 3 m a.s.l., with five large rectanguloid tent rings ca. 5 m in diameter, ten low circular boulder structures 3 - 4 m in diameter, and several above-ground caches. Heavy caribou trails run through the site. Caribou, seals, geese and sea fowl were plentiful in the vicinity.

Kangalasiorvik Bay 4 IdCr-28 This group of twenty Labrador Inuit high-walled boulder structures covers a 100 m long terrace 6 m a.s.l. and is comprised of caches, tent rings, shelters and blinds. Some Ramah chert and schist flakes are also visible, indicating a previous Dorset occupation of this site or Dorset construction of some of the structures.

Kangalasiorvik Bay 5 IdCr-29 An extensive scattering of Ramah chert and quartzite flakes was found on a gravelly beach terrace at 30 m a.s.l. 0.5 km inland. No structures were visible but this probably marks the remains of a MA site.

Kangalasiorvik Bay 6 IdCr-30 This 10 m a.s.l. beach terrace contains two caches and a surface concentration of artifacts indicating both MA and Palaeo-Eskimo occupation.

Kangalasiorvik Bay 7 IdCr-31 On a boulder beach ridge 6 m a.s.l. near an inlet on Kangalasiorvik Bay a group of boulder structures was found, consisting of one fox trap, one possible bear trap, three box graves and two caches. No cultural remains were found but the structures are undoubtedly Labrador Inuit in origin.

Kangalasiorvik Bay 8 IdCr-32 Ramah chert, Saglek quartzite and black chert flakes were found eroding from a 5 m a.s.l. sandy bank around

a small inlet. No structures or artifacts were visible. MA and possibly Palaeo-Eskimo occupation is tentatively ascribed.

Kangalasiorvik Bay 9 IdCr-33 A single Labrador Inuit semi-subterranean sod house is built into the hillside on the north side of a Kangalasiorvik Bay inlet, some 5 m a.s.l. The house measures 5 X 4 m and has a raised sleeping platform. A whale scapula is built into the east wall and remains of an oil drum stove are scattered outside.

Kangalasiorvik Bay 10 IdCr-34 Middle Dorset and MA lithic material was found scattered over a 2500 m^2 blowout several hundred metres inland. Two Dorset tent rings, one with a 10 cm deep cultural layer, occupied the north side of the blowout. This site has good potential for investigation.

Kangalasiorvik Bay 11 IdCr-35 Three probable Labrador Inuit tent rings,three caches and a surface scatter of Ramah chert was found at this site, 3.5 m a.s.l.

Kangalasiorvik Bay 12 IdCr-36 Three more probable Labrador Inuit caches are located on a 7 - 10 m a.s.l. boulder beach near the mouth of a stream.

Kangalasiorvik Bay 13 IdCr-37 A probable Labrador Inuit group of foxtraps, caches and tent rings was found on a boulder beach 10.5 m a.s.l.

Kangalasiorvik Bay 14 IdCr-38 One of the visually more interesting sites on this coast was a group of caribou blinds utilizing both natural features (steep hillside, sea, large boulders) and man-built walls to constrict and intersect a series of heavily-travelled caribou trails south of Kangalasiorvik River, 10 m a.s.l. Middle and Late Dorset material was found in association, including one large finely made tip-fluted point (Plate 4b). Two major sets of blinds 100 m apart may have been used simultaneously to trap several caribou at a time. This site provides a good example of prehistoric hunting technology.

Kangalasiorvik Bay 15 IdCr-39 At the mouth of Kangalasiorvik River, which flows from a large lake in the near interior, five Labrador Inuit tent rings were found on the beach and 15 m a.s.l. terrace. No caches were noted but the camps were mostly likely situated for exploitation of the char run into/out of Kangalasiorvik Lake (see Brice-Bennett 1977).

These fifteen sites indicate exploitation of the resources present on this 5 km stretch of coast line by several northern Labrador cultural

groups from Maritime Archaic through Palaeo-Eskimo to Labrador Inuit. Little evidence was found of substantial winter dwellings so it is assumed that sea mammals, caribou, char, freshwater fowl and sea fowl were sought loca ly during the warmer seasons of the year. Brice - Bennett (1977:160) points out that small bands of the Koruksuak/Nakvak caribou herd move out to this north coast of Saglek Bay in spring/summer, returning inland to mate in September/October. Assuming these herd movements to have held for the past four to five thousand years, caribou would have been as accessible as and probably more numerous than they are today and would have represented an important facet of coastal subsistence for all groups settling seasonally on the Kangalasiorvik Bay coast. It is hoped that more intensive work on the near interior terraces in the future will provide proof of a greater MA presence here than was noted this year.

CONCLUSION

Generally speaking, our 1982 objectives were met and surpassed. Mapping and excavation at Shuldham 9 was successfully completed thanks to an industrious crew and obligingly good weather. The site was then backfilled and left to continue its re-vegetation. Five of the seven visible semi-subterranean housepits at the site remain unexcavated and large areas of midden were left undisturbed. The hoped-for proof of contemporaneity of more than the three excavated structures (including Tent Ring 1) was not achieved (nor disproved), but nonetheless this site has produced some valuable information on the Late Dorset occupation of northern Labrador as well as additional data on early Palaeo-Eskimo, Middle Dorset, Maritime Archaic, Point Revenge and a possible Late Dorset/ Thule contact situation. In addition, the soapstone carving industry studied here has presented us with some new insights into the artistic ability, religious beliefs and domestic activities of the Dorset (see Sproull Thomson and Thomson 1981; Thomson 1981, 1982b). The recovery of a Late Dorset triangular point with Middle Dorset-type tip-fluting on the ventral face confirms the radiocarbon date of 1200 $\pm$ 80 B.P. (SI-3354) on charcoal from the House 2 midden, indicating that Late Dorset evolved from Middle Dorset on the northern coast of Labrador.

Analysis of information obtained from the Thule house selected for excavation at the Maunder site has not yet provided us with any startling

new evidence. However, a forthcoming radiocarbon date might support a suggestion of Thule/Dorset contact already hinted at in Shuldham 9.

Willingness of the crew to forego days off and embark on late-evening surveys resulted in the positive effect of our being able to cover a great deal of ground and find a large number of sites in the areas previously selected for survey but had the frustrating effect of always necessitating hasty recording, with one eye cocked to note the state of light, weather, tide, mooring or time. Consequently, though no fault of the crew, many sites were inadequately mapped, photographed, tested, measured and assessed. Overall results, however, confirm already-perceived impressions of a constant though light, and well-distributed residence on these rich but exposed outer reaches of Saglek Bay through several millennia, until the advent of the late Neo-Eskimos who, through greater numbers and possibly better adaptation, left more concentrated evidence of their presence.

By far the most exciting and surprising results of the summer were the discoveries of Maritime Archaic sites, complete with structures in several cases. The three MA longhouses with associated cache pits, several pit houses, tent rings of probable MA affiliation, and surface collections of MA tools and debitage in these outer bay locations indicates a strong adaptation to marine resources tempered with a persisting reliance on supplies of construction materials from the southern timber stands. It is clearly evident from the shape of the longhouses and the presence of post foundation supports that a considerable amount of wood was used in their construction, wood which must have been transported from the interior or coast much further south. This suggests trade with less adventurous groups at the fringes of the forest.

The presence of all the longhouses and pithouses near the winter ice edge and on boulder terraces on which longhouse foundations and pit houses could be easily excavated, could indicate that these were late winter/early spring locations from which forays were made onto the sea ice and to the sina, while Tuck's feature-less sites further inside the bay relate to warmer-weather occupations during which small temporary shelters or open camps around a hearth sufficed.

Until dating of the structures is attained it remains unclear whether they were occupied prior to the full acceptance of Ramah chert or after the chert quarries became inaccessible because of Palaeo-Eskimo

presence. In support of the former case Tuck found that his earliest dated component at Rose Island Site Q and perhaps the Upernavik Island Site N had much higher percentages of quartzite (100% at the latter site) than Ramah chert. In Hamilton Inlet, Fitzhugh's Sandy Cove 2 site containing the single-shouldered biface mentioned above has been dated on other artifacts and height above sea level at about 4800 B.P. (Fitzhugh 1972). Thus there is certainly a case for assuming that the longhouses and other Saglek structures date at the earlier end of Tuck's 4500-3900 B.P. continuum or before (Tuck 1975). Conversely, unless the single shouldered biface style is either aberrant or originated with the Maritime Archaic, a date closer to or earlier than 3900 B.P. is suggested by this anomolous point and the low elevation of at least one of the longhouse sites.

No plans have been made for a return to Saglek in 1983 but a future project will concentrate on two major problems: a resumption of the search for the elusive soapstone source(s) in Saglek Bay and a more complete investigation of the Maritime Archaic occupation of outer Saglek Bay.

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PLATE 1

Maritime Archaic Indian pit house, IdCq-48. Interior dimensions 3.5 metres wide, 1.0 metres deep. Note size of boulders.

PLATE 2

Maritime Archaic Indian longhouse, IdCp-23. View west.
Dimensions of longhouse 10 x 4 m.

PLATE 3

Ninety metre line of hopping stones curving from centre left to back of outcrop at centre right. Figure at centre background is at tent rings where stemmed biface Plate 4c was found. IdCq-50. View west.

PLATE 4

a) Ramah chert tip-fluted triangular endblade, Middle - Late Dorset; IdCq-22, Tent Ring 1.

b) Ramah chert tip-fluted triangular endblade, Middle Dorset; IdCr-38, caribou fence.

c) Quartzite stemmed biface, Maritime Archaic; IdCq-50, tent ring.

d) Quartzite single-shouldered biface, tip and base missing, Maritime Archaic; IdCq-54, longhouse.

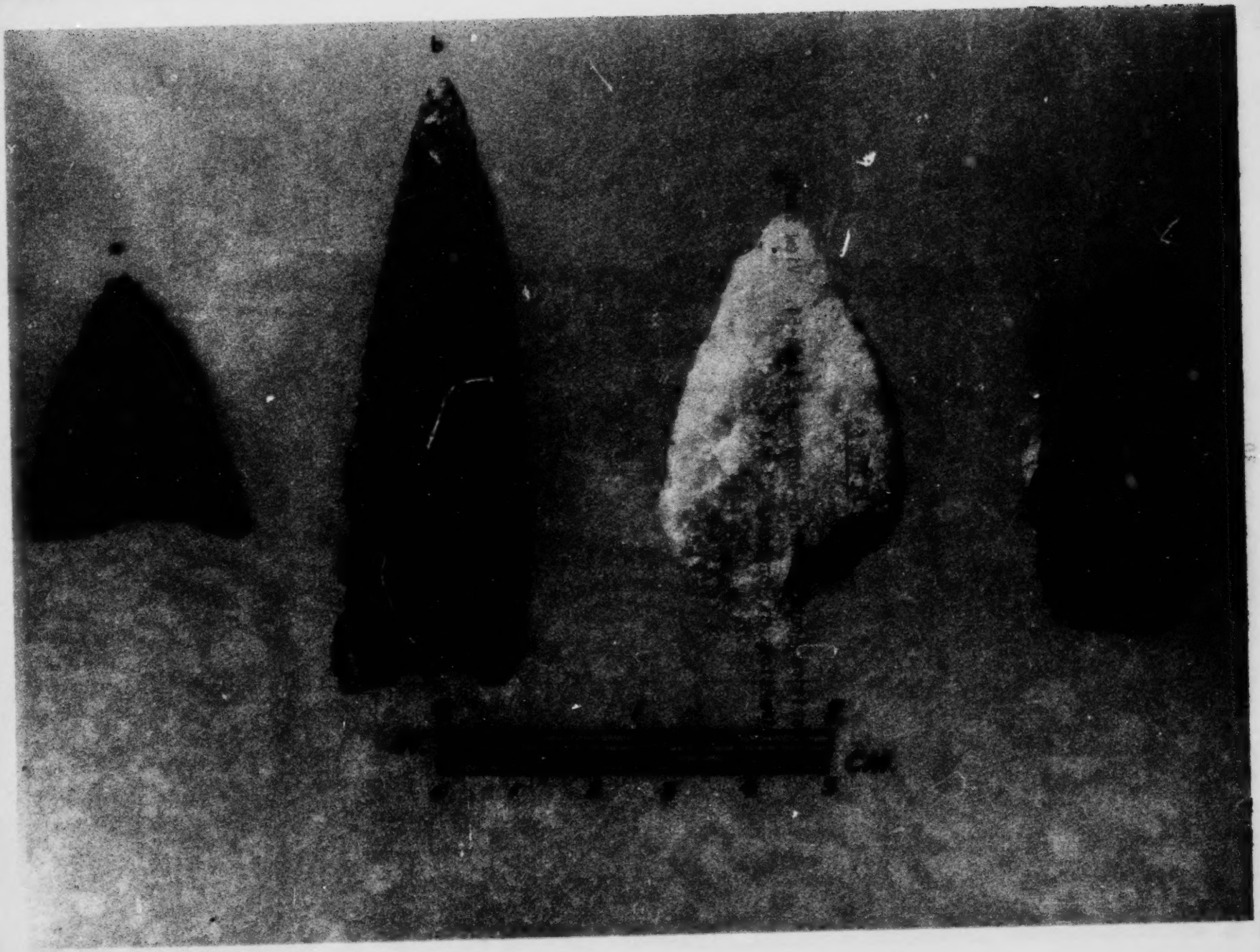
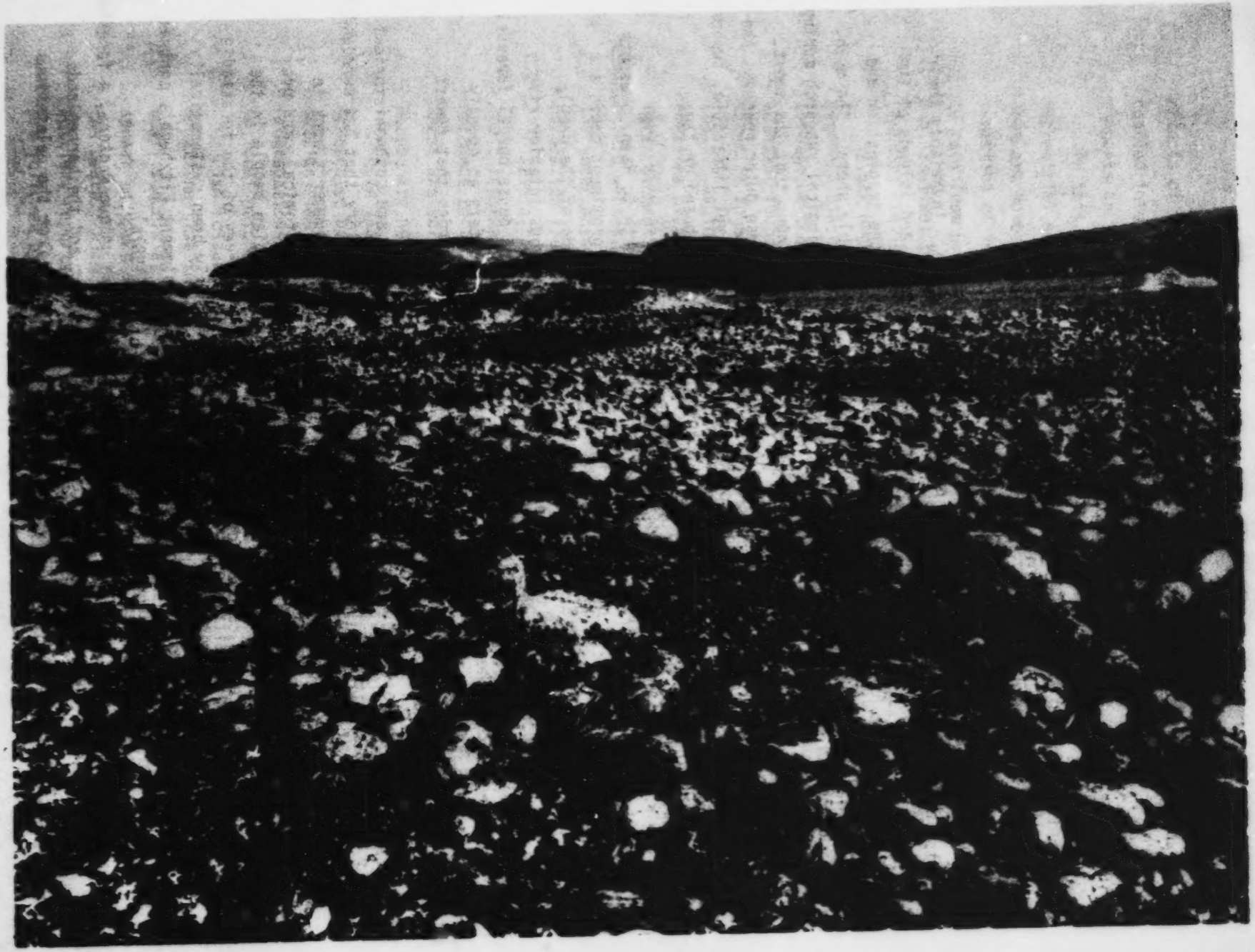


PLATE 5

Maritime Archaic Indian longhouse, IdCq-54. View south.
Dimensions of longhouse 13 x 4 m.



AN ARCHAEOLOGICAL SURVEY OF THE INNER BAY REGION BETWEEN NAIN AND DAVIS INLET, LABRADOR: A REPORT OF 1982 FIELD WORK

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INTRODUCTION

Travellers have always come to Labrador from the sea. Invariably their first impressions are formulated by the ocean-swept rocks and islands of the outer coast, a geography of desolation that has troubled the imagination and contributed to the myth of Labrador's barren and inhospitable shore. The myth, of course, is one that the kabloonaat created, for archaeological research during the last ten years has aptly demonstrated what the Inuit know, that the coast, albeit harsh, is yet bountiful. For perhaps 8000 years these outer reaches, the "waste places" and "naked hills" of the exploration and travel literature, supported a complex mosaic of Indian and Inuit adaptations that were based on the exploitation of the varied and dense marine resources.

The central coast of Labrador, from Hamilton Inlet north to Nain, presents an imposing facade of bleak and forbidding country in its prominent capes and headlands and in its island skerries; seldom is mention made of the deeply forested bays, the sheltered inner passages, and the numerous interior rivers that reach the coast through a maze of low eroded hills and dense boreal forests. Having beached the barren outer coast, the traveller encounters an equally formidable facade in the wall of spruce and the mosquito hordes that thwart interior travel.

During the 1982 summer field season, an archaeological and enthnohistorical project was initiated that sought to dispel some of the mystery that has surrounded the forested portions of the central Labrador coast. This summer's work in Labrador sought, specifically to 1) document the recent, historical, and pre-historic settlement patterns and land use of the native Indian people in the central coast region, and 2) conduct an archaeological survey of the forested inner bays, an environmental niche that has not previously been systematically surveyed. This aspect of the field work sought to complement Fitzhugh's central coast and Nain area surveys (Fitzhugh 1972, 1974, 1976, 1981a).

The inner bay region of the central coast is its own unique ecotone, a forested swath between the tundra of the outer islands to the east and the barrenlands of the Labrador plateau to the north and west. Sheltered from the deleterious

effects of the Labrador Current by a broad band of buffering islands and nestled into erosional remnants of the coastal peneplain, the inner bay region supports an impressively dense boreal forest growth.

In this distinct biotic zone, the faunal resources include elements of terrestrial and marine fauna that are unique to it, as well as other elements that are more highly concentrated here than elsewhere. The following brief summation of inner bay resources is in part derived from personal observations, in part from Brice-Bennett (1977) and from conversations with Gilbert Hay (Nain), J.B. Pastiwet (Davis Inlet), William Ritchie (Zoar, Nain), and Jim and Harvey Saunders (Davis Inlet, Goose Bay).

Black bear and caribou are the principal large terrestrial mammals of the region. Black bears are frequently encountered during the open water months. Throughout the survey region their tracks, on sand-bars and beaches, are a constant focus of attention. During the summer, occasional caribou can sometimes be found in the inner bays. Although few in number, they are often easily stalked as they seek relief from the insect swarms by travelling to exposed portions of the coast. As yet poorly understood sudden shifts in caribou herd movements will sometimes bring large numbers of animals out to the coast in mid-winter. Porcupines and small fur-bearers also inhabit the forests of the inner bays; they are both common and localized and subject to cyclical population fluctuations.

Several species of seal are known to move up into the heads of the bays. Inuit informants say that they are seeking fresh water to drink and it is not uncommon to find seals at the mouths of main estuaries. For the most part these are solitary animals; the large companies of seals, especially migrating harps, are not usually found in the inner bays.

Both fish and bird resources are seasonally available. The inner bays are frequented by large numbers of loons, mergansers and geese. Other waterfowl species, including ducks and scoters, can sometimes be found in significant congregations in the fall during staging and migration periods and in the spring in local patches of open water.

Fish resources of one sort or another are available throughout the year. About the time that the ice goes out of the interior rivers, char gather in small schools at the heads of the bays soon after which the capelin hordes appear to spawn on certain sandy shores and are washed up in windrows along the beach. With the appearance of capelin, Uncle George Shepard, a Postville Settler, reports, "Why it's as like an'other store opened up". For the capelin are followed by salmon, by seals, and by the cod. Char and salmon can be netted

at numerous berths throughout the inner bays until they gather in the late summer to return upstream.

NARRATIVE

The Bonavista's first run north for the season was delayed due to a combination of pack ice conditions on the north coast, motor maintenance and problems with the government subsidy, so that it was not until the 11th of July that she finally docked at Nain. Outfitting in Nain was quickly completed spurred by the continuation of as long a spell of sultry days, afternoon thundershowers and clear starry nights as was in our Labrador memory.

While we awaited the arrival of additional personnel and equipment, an initial sortie to Kamarsuk, 30 km south of Nain, was initiated (see Figure 1). The survey work conducted in this area located several small Maritime Archaic and Paleoeskimo sites along the mainland and bays between Kamarsuk and Anaktalak. This part of the coast remains rocky and forested throughout, with only a few level areas and still fewer raised beaches that might have been suitable for habitation. Few sites were located in this area. Numerous 18th century Neoeskimo graves (noted but not collected) and circular stone tent-rings (ubiquitous and culturally enigmatic) were found on the low rocky islands west of Kikkertavak. An early Point Revenge component was identified on Satosoak Island.

After a brief visit to Nain on the evening of July 20th, in order to make a final provisioning and to rendezvous with an additional crew member, we proceeded south past Kamarsuk, across Voisey Bay and on to William Ritchie's cabin in Takpanayok Bay near the abandoned Moravian settlement at Zoar. A telephone relay station and antenna are located on the high hill north of the bay, below which stretch a dramatic series of raised marine beaches. The absence of any cultural materials on these high beaches was in striking contrast to the presence of such remains on similar geomorphological features on the seaward islands.

Numerous recent Naskapi summer and winter tent sites are to be found in the Zoar vicinity on most of the beaches at the head of Tasialuk Bay and in Tasiuyak Bay to the south. Most often these sites are found adjacent to streams entering the bay or in the areas near "rattles" where the force of tidal currents keeps winter ice from freezing securely - or from freezing at all. During the winter of 1980, which the author spent in the Nain-Davis Inlet region, a number of former Naskapi winter camps were located just inland from the salt water in the country north of the Natakwanon. Porcupines, fur-bearers, and gallinaceous

birds were the most frequently hunted quarry from these camps. One such camp was situated on the shore of Tasialuk Lake where a principle drainage enters from the south. An Inuit hunter, Edward Noah, who lives only 6 km from the eastern edge of Tasialuk, tells of a many-armed, whale-like monster that inhabits this lake and claims it is only safe to travel after snows cover the black ice.

Primary dependence on maritime resources, and perhaps oral traditions similar to Edward Noah's, tend to restrict contemporary Inuit interior exploitation. The present day interior focus is almost exclusively on the winter caribou hunt, which is becoming increasingly centralized in the barrenlands north and west of Nain.

The last ten days in July and the first week in August were spent in an intensive survey of the deep forested inner bays between Zoar and Davis Inlet; this included Tasiuyak Bay, Nothing Bay, "Okpatik Bay", Merrifield Bay, Daniel Rattle and Sango Bay.

Several late 19th century and early 20th century Naskapi camps were identified at the heads of these bays, adjacent to the principal rivers from which access was gained to the interior. Throughout the survey area recent Naskapi sites (since 1940) are very common, evidencing a wide range of resource procurement activities.

The survey party attempted to investigate as much of the level well-drained terrain within the survey area as possible. Raised beach systems are neither as frequent nor as extensive as they are on the outer islands. However they do occur with enough regularity and with enough variation in elevation to have facilitated earlier land use of the area. In contrast to the intensive land use by contemporary Naskapi, the inner bay region does not appear to have figured dramatically in the past. Evidence of prehistoric land use was limited to several small Maritime Archaic sites and to Point Revenge sites similar to the ones located previously at Kamarsuk and at Satosoak.

The thin scatter of Indian material that was recovered in these inner runs north of Davis Inlet was in striking contrast to the absence of Palaeo-eskimo cultural remains. Although it appears that limited use of the inner bay ecotone was made by various prehistoric Indian cultures, the prehistoric Inuit adaptations remained focused on the maritime resources of the outer islands.

On the 5th of August the field party returned to Zoar. On the following day, preceeded by two boat-loads of Naskapi hunters, we moved into Voisey Bay. The desire for caribou had resulted in an impromptu departure of the Indian

hunters from their char fishing camps in Merrifield Bay. The Naskapi hunters coasted the Voisey Bay shore in search of individual animals that had come down out of the forest to eat salt and to escape from the "flies". We later learned from some disgruntled Settler fishermen that these hunters had killed at least two caribou with their pursuance of "saturation" hunting techniques, i.e. their policy of pursuing any and all potential game. This hunting strategy was frowned upon by the Settlers who claimed that the wildlife left in the wake of the Indian passage were spooked and impossible to approach.

While in Voisey Bay, our survey located two major Naskapi sites defined by the presence of numerous raised earthen-wall tent-rings. These were situated on the peninsula north of Northern Bight, and on the peninsula east of Konrad Brook. These sites date to the early part of this century and perhaps as late as the 1940's, when a large number of Naskapi resided in Voisey Bay, trading at the posts maintained by the Hudson's Bay Company and by Richard White at Old Harbour near Konrad Brook. Many of the Naskapi families camped upstream from the bay on the several large brooks and rivers that enter into the southern and western shore of Voisey Bay.

A brief stop to investigate the raised beaches on Big Island resulted in the discovery of the only prehistoric site located during the Voisey Bay survey. The recovery of diagnostic Groswater Dorset tools and debitage from surface exposures adjacent to stone slabs indicative of architectural remains warranted further attention than our schedule allowed at the time. It was decided to return to the site at the end of the field season on the way into Nain.

While still in Voisey Bay, the Kogaluk River (formerly Franks Brook) was ascended to its falls and the Ikadlivik/Reid drainage was attempted but with little success. An additional four days were spent at Kamarsuk working on the Point Revenge occupations on the upper portion of the beach terrace.

A final swing to the south was begun on August 13th; it included a visit to several of the Naskapi camps on Merrifield Bay and a survey of the islands between Tunungayualok and David Inlet where a number of small Maritime Archaic and Point Revenge sites were located.

Leaving Davis Inlet on the 15th we proceeded to Flowers Bay which was to be the southern-most investigated point of the 1982 field season. At the head of Flowers Bay there is a wicked rattle that sometimes bars entrance to the inner bay. Successfully passing this barrier, one reaches the sanctuary of a deep inner bay, the shores of which hosted numerous previous Naskapi camps

as well as a large contemporary one.

Having repassed the treacherous rattle at the head of the bay, we made an attempt on August 19th to go ashore on the east side of Flowers Bay, but the inhospitality of that lee shore and the threat of winds and tide made a landing unfeasible. Consequently a landing was effected on Solomon Island (Figure 3a), a large exposed island situated at the mouth of Flowers Bay and Davis Inlet. It did not take long to confirm that the paucity of Paleoeskimo material in the inner bays did not extend to all environments of the central coast, but rather it reflected the strong environmental preferences of those groups for access to exposed maritime settings. In fact, the density of Paleoeskimo sites immediately adjacent to our landing point limited survey work to the low beach series on the southwest corner of the island. Unquestionably, the Paleoeskimo archaeology of the central coast archipelago will prove as rich and as exciting as the work done on the outer islands of Nain and Okak. The degree to which the outer islands were utilized by prehistoric Indian populations has yet to be assessed.

Having completed the survey of the inner bays between Davis Inlet and Voisey Bay, we found that the return to Nain proved to be a prolonged affair. This was due in part to a long overdue spate of dirty weather, Torngak's autumnal dues, and to the circuitous route that archaeological priorities demanded. A stay in Davis Inlet collecting land-use and hunting data was followed by excavations at the early Point Revenge component at Daniel Rattle and at the Groswater Dorset site in Voisey Bay.

Well after dark on September 3rd, with canoes and equipment in tow, we saw the lights of Nain, bringing to an end the field portion of the summer's research.

RESEARCH RESULTS

This season's field work in Labrador sought to lay the groundwork for an in depth study of the late prehistoric and historic Indian occupations in Labrador. In that respect archaeological survey work was facilitated by interaction with Naskapi families in Davis Inlet and camps in Merrifield and Sango Bay, where we sought to document contemporary, recent and historical Naskapi land use between Nain and Davis Inlet. The ethnohistorical fieldwork was opportunistically pursued during the course of a more generalized archaeological research strategy that was similar to and complementary with the Smithsonian surveys conducted by Fitzhugh in the Nain area in 1974-1976 and 1980.

An intial preliminary discussion of some of the survey results follows:

Maritime Archaic Support for Fitzhugh's model of Maritime Archaic hunter-gatherer social complexity, originally derived from architectural remains indicating communal residences (Fitzhugh 1981a, 1981b, 1982), is provided by data recovered from a Maritime Archaic component at Daniel Rattle-1 (GlCg-1). The site is situated on the mainland side of the confluence of Daniel Rattle and Sango Bay on a series of raised marine beaches that afford a commanding view to the south of Merrifield Mountain and nearly all of Sango Bay. The site location is an important one; in addition to the Maritime Archaic component, there is also evidence of Point Revenge and contemporary Naskapi use of the beaches.

The Maritime Archaic component consists of at least six circular cobble hearths that were found arranged in a linear alignment approximately a metre from the edge of a well-defined terrace 23 m above present sea-level. The hearths are approximately one metre in diameter and appear to be in two distinct clusters. Additional hearths may once have been situated between the two surviving clusters but the construction of recent Naskapi winter tent-sites, necessitating a shallow excavation for the tent floor, may have obliterated these remains. Artifactual material associated with the hearths was exceedingly scant, but included two small-stemmed flake points, the proximal end of a Rattler's Bight stemmed point, two biface fragments and less than 20 pieces of debitage. Ramah chert was the sole raw material represented in the collection.

The non-overlapping spacing of the hearths and their close proximity and alignment suggest that they are coterminous. At least two, perhaps four, distinct structures are suggested by the hearth alignments. The well known propensity for hunter-gatherer groups to break into smaller units for resource procurement activities is confirmed by such sites as Daniel Rattle-1. The presence of multi-hearth structures suggests the possibility that this fissioning occurred along corporate or extended-family lines.

The paucity of lithics at the Daniel Rattle-1 site may be an indication that the primary activities conducted at the site did not feature man the hunter. Fishing, presumably was the primary inner bay exploitative strategy, pursuance of which would utilize an inventory of tools not likely to be preserved. The site could also have served as a staging area for brief forays on seasonally available congregations of waterfowl, or as a coastal camping place for family members while hunters sought to establish a secure cache

of meat in the interior (as the Naskapi tended to do prior to the adoption of personal snow machines).

A site similar to Daniel Rattle-1 is located at the "Okpatik Rattle" north of Merrifield Bay. This area was visited by Fitzhugh on his way south to Postville in 1980 (Fitzhugh 1981a:38-39); it is a favoured summer camp for several Naskapi families. Prehistoric cobble hearths are scattered about the present day tent-sites. The site remains a potentially interesting one although much of it may have been disturbed by recent Naskapi activity.

Three small Maritime Archaic hunting camps were identified on the highest beach in a series on the west side of Flowers Bay (GlCe-4). The "camps" consist of several blow-outs each containing a deflated hearth that was surrounded by a light scattering of Ramah chert debitage, stemmed projectile points and biface fragments. The low artifact: flake ratio (1:2) and the presence of only stemmed projectile points supports the contention that these sites represent specilized hunting camps occupied for brief periods.

One aspect of the Maritime Archaic is epitomized by the very diffuse scatterings of Ramah chert, quartz, and Mugford cherts that are sometimes found on high marine terraces, often at elevations greater than Rattlers Bight phase assemblages. They consist of perhaps eight to ten pieces of quartz, two or three Ramah chert flakes, and a single flake or two of Mugford chert widely scattered over 20 or 30 m in diameter. There are neither stone tools nor features of any description found associated with the debitage. These sites are not uncommon in the Nain area where one can't help but feel the pervasiveness of the early hunters. They may relate to the period of initial colonization of the north coast. The paucity and variety of raw materials suggests an experimentation with new resources that eventually culminates with regular procurement of the favoured Ramah chert in preference to nearer, but apparently less appealing, quartz and Mugford cherts.

This description applies to two sites located this summer one at Kamarsuk (HbCJ-4) and the other on Wolf Island (GlCf-2). Wolf Island also contained two sets of boulder pithouses (GlCg-3 and GlCg-4) similar to ones found at Big Bay south of Davis Inlet, as well as at other localities in the Nain region.

The narrow focus of activities at the inner bay Maritime Archaic sites is apparent from both their size and the limited nature of their assemblages. As such, they form an important contribution to our perception of Maritime Archaic adaptive strategies. When grouped together with the large sites on the

outer islands, the sites in the inner bays begin to indicate something of the diversity of the resource base that supported Labrador's florescence of Archaic culture.

Saunders Complex Only a few traces of Saunders Complex associated material were located during the course of the 1982 field season. Three small collection areas from Flowers Cove-2 (GlCe-4) produced a sparse assemblage of tools and debitage attributable to a Saunders Complex component. The sites appear to have resulted from brief resource procurement activities.

Another site (HbCj-4) attributable to this period was located on the high beaches above the Settlers' cabins at Kamarsuk. Here a small representative sample of debitage and biface fragments was collected from the surface of a number of small blowouts. Portions of several buried features, probably cobble-hearths, were apparent but were not excavated. The site appears to contain a well preserved component that warrants additional attention.

Northwest River Phase Flowers Bay-1 (GlCe-3) is a small site located on the western shore of Flowers Bay on the prominent peninsula near the mouth of the bay. The site consits of a deflated hearth and a surface scatter of debitage, including coarse-grained cherts, felsites, quartz, and what appears to be banded lava. Limited test excavations adjacent to the hearth revealed the presence of a charcoal-filled pit which contained additional flakes of chert as well as a leaf-shaped biface of the same material. The small collection that was derived from the site appears to be closely allied with the Northwest River phase as defined by Fitzhugh on the basis of his work in Hamilton Inlet and Groswater Bay (Fitzhugh 1972:115-116, 131-132, 152-155). The Northwest River phase was initially thought to be the Labrador expression of the Shield Archaic, a generalized interior boreal forest adaptation (Wright 1972). With the expanded scope of research in the Strait of Belle Isle these presumed influences with western traditions are no longer unequivocal. Fitzhugh believes that the assemblages at Northwest River in Lake Melville date to around 1400-1800 years ago. It has not previously been recognized north of Hamilton Inlet.

Point Revenge One of the pressing historical problems in Labrador prehistory concerns the nature of the late prehistoric - early historic Indian occupation of the Quebec-Labrador peninsula. The archaeological record is silent after the beginning years of the 17th century; but for a few vague references in the exploration literature (Holmes 1827, Kupp and Hart 1976, Quinn 1981), there is next to nothing to document the Indian presence until the early

decades of the 19th century when the records of the Moravians (Kohlmeister and Kmoch 1814) and the Hudson's Bay Company (Davies and Johnson 1963) pick up the trail. In contrast to the wealth of archival material available in the Moravian archives on coeval Inuit populations, our knowledge of contact period Indian adaptations and their relationship to Naskapi origins remains obscure.

Part of the strategy behind the inner bay survey was that it was hypothesized that the processes that apparently resulted in a modification of an earlier maritime resource subsistence base by one that depended more and more on interior resources would be represented by sites at the boundary of these two ecosystems. It was hoped that sites would be discovered that would make a direct historical approach to these problems applicable. Unfortunately our research failed to turn up new sites, and the search for answers to these questions must now be taken to more promising areas in interior and southern Labrador. Unfortunately, many of the answers to these problems may lie drowned beneath the waters of dammed Lake Michikamau.

Although the chimera of contact Indian culture eluded us, the survey did locate several important early Point Revenge sites as well as several large 19th and 20th century Naskapi sites. The Point Revenge material is discussed below, the Naskapi material in the following section.

Satosoak (HcCk-7) Satosoak is a large wooded island at the head of Anaktalak Bay. An unusual linear cobble hearth was found on a beach 7.3 m above sea-level along the southeast corner of the island. Excavations revealed a densely packed cobble-pavement two metres long and 50-60 cm wide; the hearth was situated at right-angles to the shore and appears to have been an isolated feature. Excavation of the feature revealed copious amounts of Ramah chert debitage. Although no diagnostic tools were recovered in our excavations, an early Point Revenge attribution is based on several lines of reasoning. The absence of any flat slabs or hearth-box construction and the exclusive use of Ramah chert are atypical of Paleoeskimo cultures. The closest parallels in hearth construction are found at the Saunders Complex component at Thalia Point (Nagle 1978:132-134, Figure 8), radiocarbon dated to 3100 $\pm$ 75 B.P. (SI-2524). However, Ramah chert does not figure significantly in most assemblages of Intermediate period Indian groups who preferred to exploit interior chert localities. The locational data, the elevation, and the presence of numerous broad bifacial thinning flakes all support a Point Revenge designation.

Kamarsuk (HbCj-1). The Point Revenge site at Kamarsuk is situated on a low beach terrace between six and seven metres above sea-level where it is nestled between two high bed-rock outcrops. The site is located on the easternmost extension of the mainland forming the northern shore of Voisey Bay. Previous visits to Kamarsuk had revealed that the thick carpet of surface peats obscured what appeared to be a major prehistoric component. Every test-pit in the central and northern portion of the terrace produced Ramah chert debitage lying at the junction of the peat and the beach sands. Large Ramah chert flake tools, analogous to finds at the Postville sites (Fitzhugh 1978:160-163), and square-based bifaces demonstrate an early Point Revenge component. The artifacts were found associated with a distribution of Ramah chert debitage that delineated a small circular structure two metres in diameter (Figure 5).

Daniel Rattle-1, Area II (GlCg-1). One of the most favoured areas for settlement in the inner bays was and apparently still is the prominent series of raised beaches at the head of Daniel Rattle. The beach series is sandwiched between a rock outcrop on the Daniel Rattle shore and a dense stand of spruce that fronts onto Sango Bay. There are recent, historic, and prehistoric components located on various beach levels at Daniel Rattle-1. The Maritime Archaic component has been previously described. The early Point Revenge component at Daniel Rattle is, to date, both the largest and most complex of this period to be discovered. Cobble hearths and Ramah chert tools and debitage are found at several localities on beaches between 10 and 15 m above sea-level.

Flakes of Ramah chert were found exposed on the surface of a foot-path that led from one of the recent Naskapi winter tent-sites down to a spring nestled at the foot of the bedrock exposure. Excavations adjacent to the foot-path revealed a major early Point Revenge site. Two small circular cobble-hearths were excavated. The hearths were found surrounded by a profusion of Ramah chert flakes and artifacts. The remains of at least two other hearths were apparent nearby, where part of the cobble arrangements protruded through the thin moss and lichen carpet. Forty metres to the southwest, on the corner of the same beach terrace, there was another concentration of activity with the presence of at least three hearths. Sometime previously, much of the moss and lichen vegetation covering these hearths had been turned over and the hearths dismantled by Naskapi children in pursuit of curiosities.

Almost all of the tools recovered had been broken, but of the reconstructable specimens the most prolific class was a distinct variety of carefully-thinned bifaces that had straight bases, squared corners, and slightly convex blade outline. Additional artifacts that were recovered included several unusually large utilized flake scrapers and knives similar to specimens recovered from the Point Revenge sites in Postville (Fitzhugh 1978: Figure 11:J, K), and a single proximal fragment of a large side-notched projectile point. Ramah chert was used exclusively.

Three additional, albeit small, Point Revenge components were located during the summer's survey work.

Daniel Rattle-2 (GlCg-2). A prominent black headland of tumbled boulders forms a conspicuous feature of the north shore of Sango Bay just west of Daniel Rattle. At the base of this bedrock exposure there is a small pocket beach approximately five metres above sea-level. A concentration of crushed, broken, and calcined animal bone fragments, approximately two metres in diameter, was found strewn about the surface amidst a number of large ice-rafted boulders at the crest of the beach. Ramah chert flakes and a biface fragment were found associated with the faunal remains and relate this feature to a Point Revenge component.

Sango Mountain Stream (GlCh-1). At the mouth of the first principal drainage south of the mouth of Sango Brook, there is a narrow peninsula on the south shore which held the remains of a circular, raised earthen-wall tent-ring and, nearby a small cobble hearth. The two features were some five metres apart. Although no diagnostic materials were recovered, the tent-ring is thought to relate to a late 19th or early 20th century Naskapi occupation, although the presence of Ramah chert debitage associated with the hearth suggests a Point Revenge association. The presence of an isolated cobble hearth without an encircling tent-ring is, as Fitzhugh has noted (1978:169), a characteristic of the Point Revenge settlement pattern in the inner bays and estuaries.

Wolf Island (GlCg-5). An isolated Point Revenge hearth and associated debitage was found in a blow-out on Wolf Island. This small component was on a beach 6.8 m above sea-level and appears to have resulted from a very brief occupation.

At Kamarsuk and at Daniel Rattle-1 there is evidence of larger aggregations than have previously been attributed to this period. Excavations have not yet proceeded far enough to determine the size and nature of these encampments beyond preliminary observations.

The range of variation in the small Point Revenge sites located during the survey complements those previously described by Fitzhugh and serves to demonstrate the Point Revenge exploitation of a broad variety of environmental niches. The numerous sites in the forested inner bays provide a strong suggestion that interior resources figured significantly in adaptive strategies during the Point Revenge period. The nearly exclusive dependence on Ramah chert evidenced at these sites raises what is the potentially most intriguing aspect of this late-Indian cultural manifestation: that is to understand the mechanisms by which Point Revenge access to the sources of Ramah chert was maintained. Archaeological reconnaissance and excavations in northern Labrador have demonstrated that throughout the Point Revenge period the mountainous coast north of Nain was continuously occupied by prehistoric Inuit populations. Evidence of Late Dorset and Point Revenge contact is suggested by scatterings of isolated Point Revenge projectile points between Hebron and Ramah Bay and their recovery in a Late Dorset house at Saglek (Thomson 1982:8).

The paucity of Late Dorset material along the central coast south of Nain supports Thomson's suggestion that Point Revenge people travelled north to Ramah chert sources in the fiords at Saglek and Ramah. For almost a thousand years there is a ready flow of Ramah chert to Indian groups along the entire coast of Labrador from Nain to the Strait of Belle Isle.

The arctic coast line in Labrador is a thin ecological strip. Cultural adaptations that relied exclusively on the resources to be derived from this maritime environment must have adopted special social and economic strategies to maintain access to resources despite the restraints inherent in "linear environments". Presently available data demonstrates an apparent ethnic boundary phenomenon operating to distinguish separate territories for the two resident populations on the coast at this time. The permanence of ethnic boundaries has been attributed, in some instances, to the successful articulation of separate complementary resource procurement systems(cf Haaland 1969:60). It is in this light that the dynamics of cultural interaction might be perceived in the late prehistoric period in Labrador. Given the amounts of Ramah chert extracted from the northern quarries, a formal, if not elaborate, set of social institutions and procedures can be expected to have existed that permitted the flow of information, materials and access to resources, across cultural/ethnic boundaries.

NASKAPI ARCHAEOLOGY AND ETHNOGRAPHY

The southern expansion of the Thule culture bearers into northern Labrador

in the 15th and 16th centuries resulted in the disruption and displacement of the indigenous Late Dorset population. The homeostatic relationship that appears to have existed between the Late Dorset and Point Revenge populations, which may have carried over into the initial period of Thule presence on the North coast, was toppled by the Thule expansion into traditionally Indian territory and by Thule control over the area of the vital Ramah chert sources. It is suggested that Thule social organization, which incorporated a number of extended family units into a single coherent political and economic entity, was successful in displacing their Indian predecessors who lacked both the numbers and the organizational capacity to meet this new challenge. Inuit access to European materials further unbalanced the status quo. Under these pressures the Indians apparently withdrew from the central coast and, for the most part, from the view of travellers, traders, and anthropologists. Seventeenth century radiocarbon dates from a Point Revenge site in Hamilton Inlet may attest to a later Indian presence on the south coast and it is to the heads of those forested bays that archaeological attention should turn. North of Hamilton Inlet, the earliest ethnohistorical sources are vague with reference to Indians at all, and it is not until the Hudson's Bay Company puts in a belated appearance in northern Quebec around 1820 that the Naskapi begin to have an ethnohistorical (Davies and Johnson 1963) and an archaeological (Lee 1966, Samson 1975, 1978) identity.

References have been made in the course of the preceeding narrative to the intensive land-use of the inner bay region between Voisey Bay and Flowers Bay by contemporary Naskapi families "from" Davis Inlet. Additional documentation will be forthcoming in subsequent reports. Here it is sufficient to say that all recent incidents of land use were documented, including the locations of residential summer fishing camps as well as the over-night bivouacs of hunting parties (Figure 4).

Archaeological evidence confirms the historical record that the present day intensive Naskapi exploitation of the maritime environment is initiated only at the beginning of this century. An important historic period site, the Notakwanon Delta site (HaCi-2), was located at the head of Merrifield Bay at the mouth of the Notakwanon River (Figure 2a). At the Notakwanon Delta site there are at least 20 raised circular earthen-wall tent-rings that are identical to ones described by Gilles Samson at Indian House Lake and by Tom Lee at Fort Chimo. Characteristically these structures have an interior

diameter between two and three metres and a centrally-located earth and stone hearth, all of which are surrounded by an earthen wall that varies between 20 and 50 cm in width and is approximately 10 cm in height. Although analysis is not yet complete, the ceramics, ammunition and nails recovered from some of the structures may date as early as 1875; however, most of the structures are clearly later.

Raised circular earth-wall tent-rings were also found at several sites near the head of Sango Bay and on the peninsula that juts out into the south side of Voisey Bay immediately east of Konrad Brook (Figure 2b).

Space does not permit here a detailed assessment of the ethnohistorical documentation that resulted from the survey's reconnaissance. Almost anywhere you go ashore in the bays south of Nain and north of Windy Tickle, traces of recent (20th century) Naskapi activity will be found. The importance of this land to the Naskapi is evidenced both by the intensity of land use and by the reverence which still inspires their trust of the land. Archaeologists deal with the material correlates of behavior; there is as much to be inferred from the presence of tenting sites and wooding places (which evidence settlement-subsistence strategies) as there is from the bundles of goose wings and mandibles, bear skulls and caribou antlers, that are found cached in trees throughout the area, attesting to the symbolic aspects of the man-land relationship.

Paleoeskimo With a single significant exception, no Paleoeskimo sites were discovered in the forested inner bays. But for the aforementioned example, much of the material discussed here resulted from a foray out to one of the seaward islands east of Davis Inlet.

Groswater Dorset Within the region of this summer's research it appears that the only extensive utilization of the resources available from the sheltered forested environment of the inner bays, by Paleoeskimo groups, occurred during the Groswater Dorset period.

An important Groswater Dorset site, Voisey Bay-1 (HbCl-3), was discovered on Big Island near the head of Voisey Bay. The remains of a single structure were found in the southeast corner of the highest stranded marine beach. Excavation revealed an amorphous linear arrangement of flat slabs, several of which encircled a central cooking area (Figure 3b). The hearth area was clearly delineated by the presence of a heavily fire-burned slab which formed one end of an area bordered by two parallel flat slabs. A fragment of a shallow steatite lamp, encrusted with burnt fat, was found beneath the heavily

burned slab. A small diagnostic Groswater Dorset assemblage was recovered from the structure. Access to a variety of raw materials whose sources evidence participation in a far-flung "interaction sphere" stretching along the long Labrador coast from the Torngat Mountains to the shores of Newfoundland's Northern Peninsula, is evidenced by the diversity inherent in both the tools and the debitage recovered from the site on Big Island.

The Big Island site provides a dramatic indication of the importance of interior resources for Groswater Dorset hunters. It corroborates the evidence from the large Groswater Dorset winter site excavated in 1977 at the head of Kiapokok Bay at Postville. The Big Island site gives ready access to the Kogaluk, Konrad, and Ikadliuik drainages, all of which lie in heavily forested, glacially-scoured troughs that provide a thoroughfare to the barrenlands and the interior herds of caribou.

The desire to facilitate caribou hunting is believed to be the primary reason behind the location of the Big Island site. There is a rocky knoll just west of the site that has been used by modern Inuit hunters as a lookout enabling them to spot seals basking on the late-winter and spring ice. Similar strategies may also have been enacted by Groswater Dorset hunters. A winter time occupation of the site would circumvent the lack of fresh water sources on the island. The recovery of isolated Groswater Dorset artifacts near the mouths of Voisey Bay (HbCj-4) and Flowers Bay (GlCe-3) may be further indication that subsistence strategies necessitated travel between the inner bays and outer islands.

A brief sortie was made out to Solomon Island, situated at the entrance to Davis Inlet and Flowers Bay where several Paleoeskimo components were located. Solomon Island-2 (GlCe-6) consists of a small isolated Groswater Dorset hearth which was found in a deflated sand dune on the southwest corner of the island (Figure 3a). A concentration of Groswater Dorset chert debitage and microblades was found about 70 cm from a diffuse scattering of Ramah chert debitage. Among the diagnostic tools collected from the site were a box-based side-notched end blade and a portion of a side-blade. A burin spall and 20 microblades were also recovered. The Solomon Island-2 assemblage is analogous to several of the small Ticoralak assemblages reported by Fitzhugh in Groswater Bay (1972:150) which are believed to represent resource procurement camps that were briefly occupied during the summer season by a small mobile family group.

Middle Dorset At a lower elevation of the same Solomon Island beach series on which the Groswater Dorset component was located, a small Middle Dorset assemblage was collected. The Solomon Island-1 (GlCe-5) assemblage had been exposed by wind erosion which had undermined the level terrace on which the site had originally existed. The blowout beneath the terrace did not contain any large slabs or boulders so apparently no significant structure had been associated with the assemblage.

The presence of a Middle Dorset component on one of the central coast islands that sits astride the outer island and inner bay ecosystems comes as no surprise to anyone familiar with Labrador archaeology. The total lack of any Middle Dorset archaeology in the inner bays dramatizes how strongly the Middle Dorset economy was focused towards maritime resources.

CONCLUSIONS

The 1982 field season contributed a number of new insights into our understanding of historic and prehistoric land use, especially as it is represented in the inner bay ecotone. As a result of this research, subsequent analysis will focus on the nature of the mechanisms by which ethnic boundaries exist and are maintained, especially as this applies to groups of Late Dorset and Point Revenge people, and on an explanation of the nature of changing economic strategies among the late Indian and historic Naskapi occupations that are suggested by shifts from a partial coastal dependence to one focused almost exclusively on interior resources. Clearly this aspect of the research along with the ethnoarchaeological research requires subsequent fieldwork in the Labrador interior for substantiation.

ACKNOWLEDGEMENTS

Attempts to convey something of the debt of appreciation and gratitude owed to William Fitzhugh can only be alluded to here. Not only was he instrumental in bringing me to Labrador in the first place, but he has continued steadfastly to nurture and support my involvement with research there. During this project's initial planning stage he offered to make stored Smithsonian equipment available for our use; I only hope that in some of the directions initiated in this study he will find partial payment for his trust and enthusiasm.

Labrador is a compelling mistress and I was fortunate that her charms are such to lure some folks away from the more practical aspects of making a living. Overcoming the flies and the cold wet weather and yet retaining

some semblance of sanity, I benefitted mightily from the volunteered labours of William Ritchie and Eric Loring prior to their departures further north. Various I.G.A. personnel provided help in the field, as well as sustenance and shelter in town, and their enthusiasm and dedication are a boon to both the communities they serve and the itinerant archaeologists that they befriend. Embarrassedly, in that words are poor payment for the kindnesses bestowed, I must especially acknowledge John and Joanne Terriak, who made their house in Nain home for me. For sharing something of their knowledge of their land I also recognize my debt to Gilbert Hay, Jim and Maggie Saunders, J.B. Pastiwet, and those unnamed who kept a watchful eye on the kabloonaat. On passing through Goose Bay, travelling to and from the coast, we received further evidence of the pervasiveness of northern hospitality from Libby Anderson and Charlie Veitch, and from Winston White.

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Jurisdiction over the land on which this survey was conducted is ethically, if not yet legally, in the hands of the Naskapi at Davis Inlet. Our survey benefitted from frequent visits with families camped in the country outside of town. As a token of our appreciation for their hospitality, interest, their aid in showing us sites and their willingness to share their knowledge of the land and its resources, it is hoped that this report and the research initiated might contribute to an understanding of their unique adaptation. No greater courtesy than theirs could be expected.

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ADDENDUM: pp.55 a, b, c and d arrived just prior to printing; however due to the importance of publishing the relatively rare photographs of Point Revenge and Groswater material, they have been accommodated.

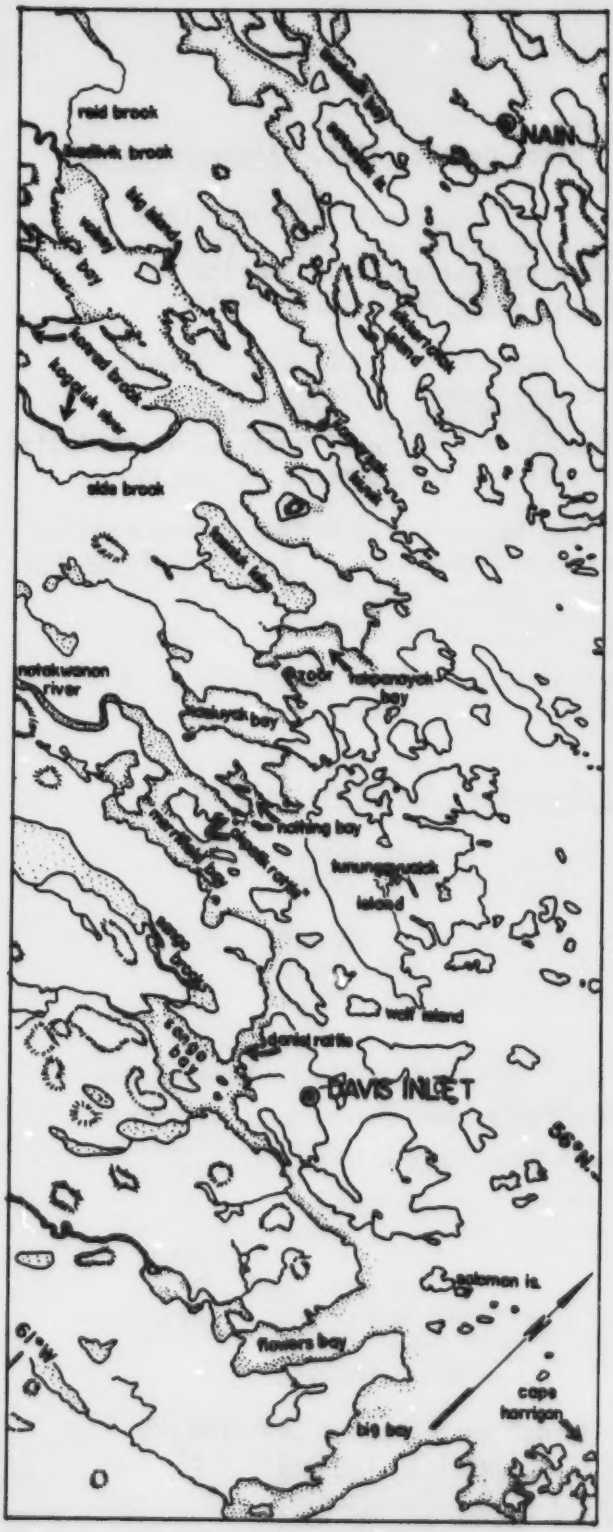

Fig. 1 1982 Research Area
(placenames used in text)

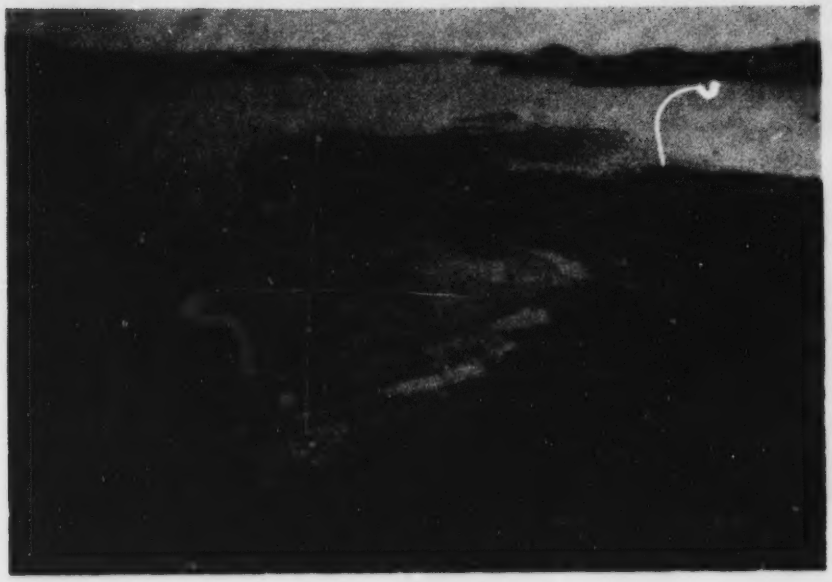

Fig. 2a. The Notakwanon Peninsula. The Notakwanon River enters Okpatik Bay on the left. The view is to the east with "Okpatik Rattle" in the distant center. Numerous 19th and 20th century Naskapi raised earthen-walled tent-rings were found on the peninsula.

Fig. 2b. Raised earthen-wall tent-ring near Konrad Brook, Voisey Bay.

Fig. 3a. Solomon Island, view to the west towards Entry Island and the mouth of Davis Inlet. The Middle Dorset site, Solomon Island-1 was found at the foot of the eroding terrace center right; the Groswater Dorset site, Solomon Island-2, in the left center-foreground.

Fig. 3b. Voisey Bay-1, view to west.

Fig. 4a. Naskapi summer char fishing camp at the "Okpatik Rattle", Merrifield Bay.

Fig. 4b. Bear skulls and caribou antler hung in tree at Kaskapi camp, Flowers Bay.

FIGURE 2
ARTIFACTS FROM INDIAN SITES

Point Revenge (a-i: Daniels Rattle-1, Area II; j-k: Kamarsuk) assemblage including large straight and convex-based bifaces (a-b, d-f, k), side-notched bifaces (c) and large flake scrapers/knives (h-j).

Northwest River Phase bifaces of coarse-grained felsite from Flowers Bay-1 (l, m).

Saunders Complex side-notched projectile point of weathered chalky chert from Flowers Bay-2 (n).

Maritime Archaic stemmed projectile points and flake points (o, p: Flowers Bay-2; q-s Daniel Rattle-1, Area I).

All the artifacts are made of Ramah chert unless otherwise noted.

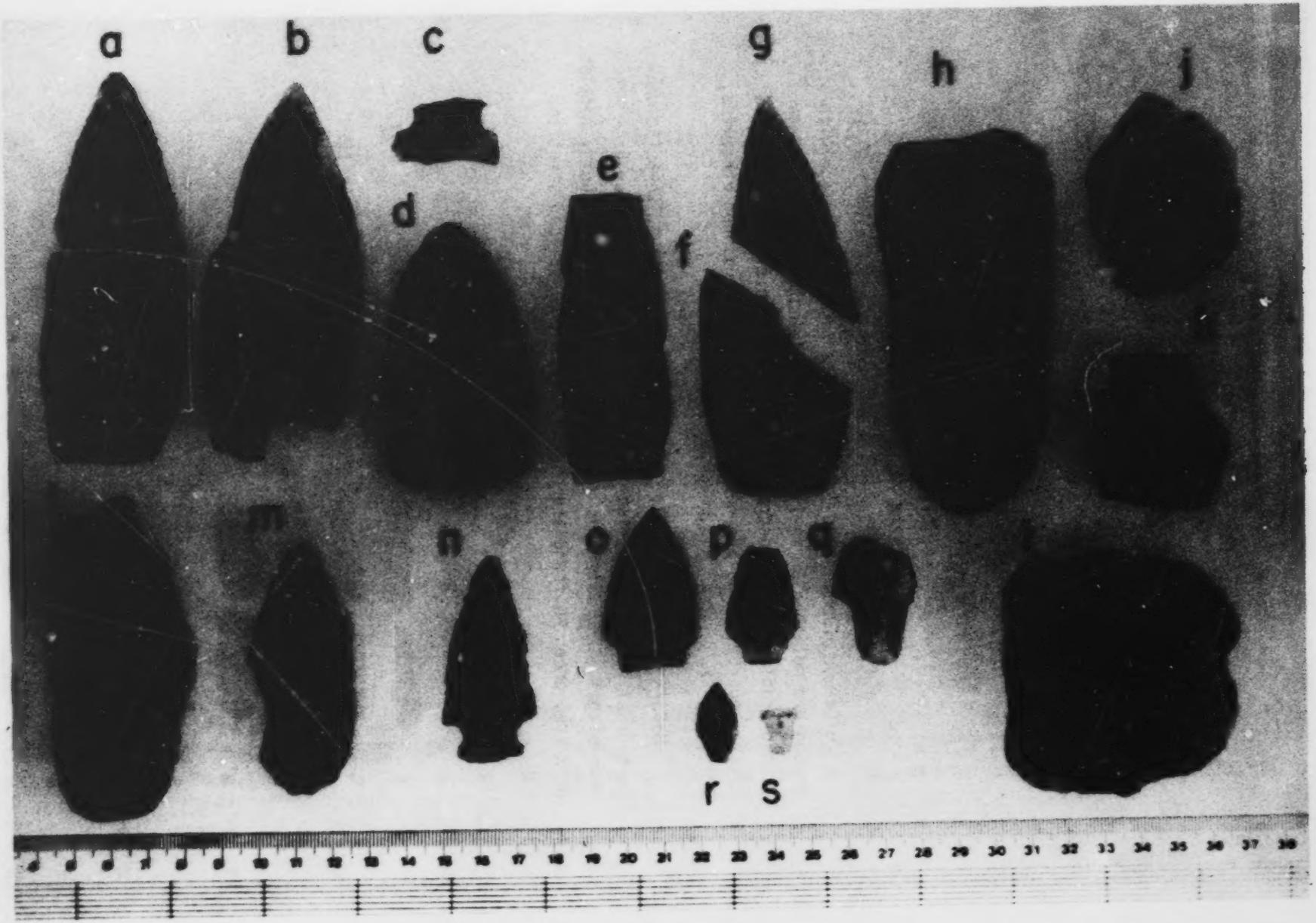
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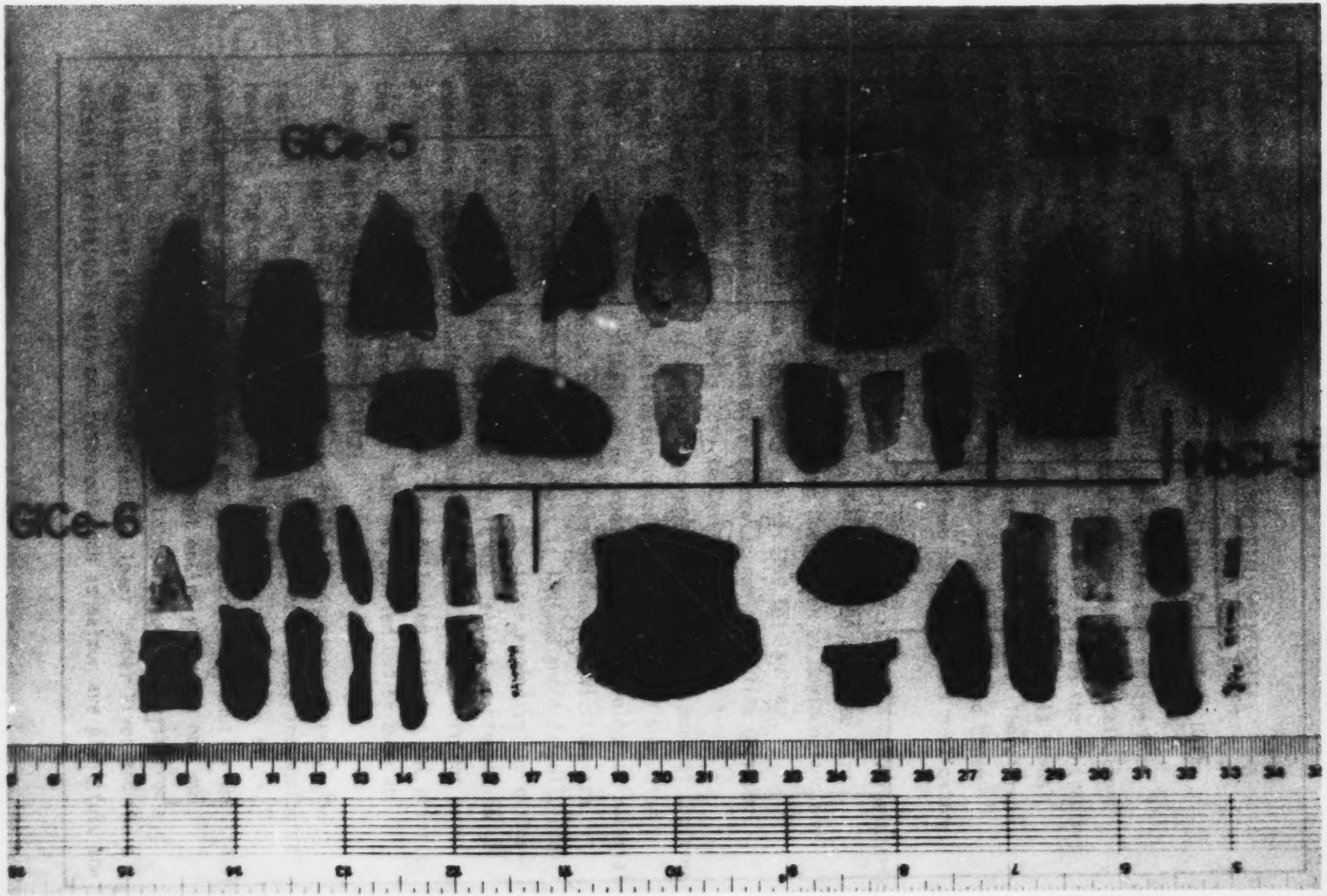
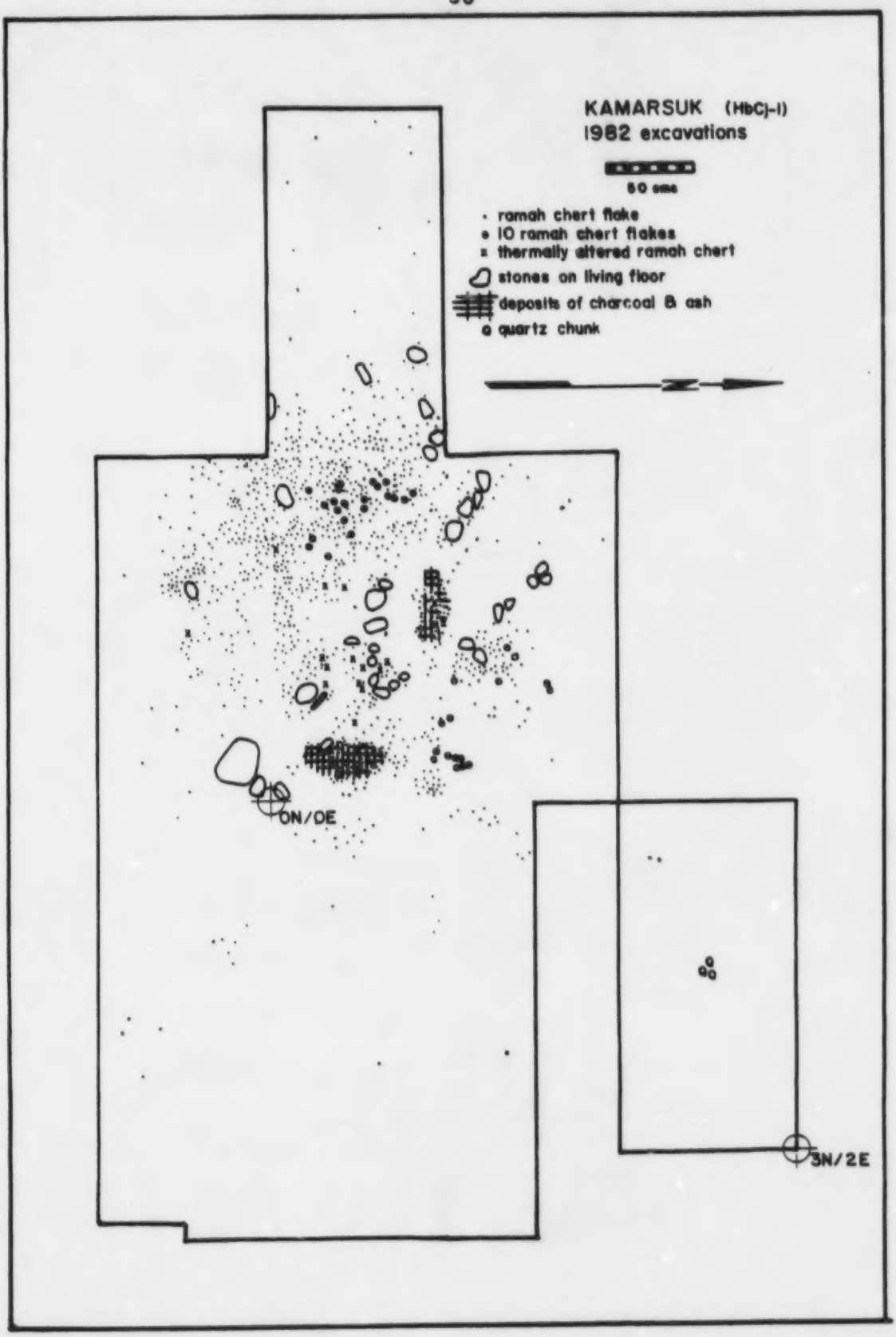
FIGURE 1
ARTIFACTS FROM PALEO-ESKIMO SITES.

GlCe-5, Solomon Island-1, is a Middle Dorset assemblage with a ground and polished burin-like tool, a side-notched blade, 3 tip-fluted endblades, an endscraper, a polished schist fragment and a crystal quartz microblade core. Except where mentioned otherwise, all tools are made of Ramah chert.

HbCj-4 (High Kamarsak), GlCe-3 (Flowers Bay-1), GlCe-6 (Solomon Island-2), and HbCl-3 (Voisey Bay-1) are all Groswater Dorset assemblages. Raw materials include Ramah chert, black chert, mottled brown-red-green Newfoundland cherts, crystal quartz and steatite.


GICe-5
GICe-6


KAMARSUK (HbCj-1)
1982 excavations
50 cms
• ramah chert flake
• 10 ramah chert flakes
x thermally altered ramah chert
stones on living floor
deposits of charcoal & ash
o quartz chunk
N
0N/0E
3N/2E

CONTRACT ARCHAEOLOGY AT MEMORIAL UNIVERSITY

James A. Tuck
Memorial University of Newfoundland, Archaeology Unit

The Archaeology Unit at Memorial University carried out four excavation or survey projects under contract to various institutions during 1982. Although complete reports are on file with the contractors it seems worthwhile to review these projects briefly in this annual report since publication of these reports may not ensue. Therefore, each is described briefly below. The location of these and other projects described in this report are shown on p.i of this publication.

CAT ARM HYDRO DEVELOPMENT

This was part of the continuing monitoring of the Cat Arm hydroelectric development now under construction on the west side of White Bay, Newfoundland. The development is being undertaken by Newfoundland and Labrador Hydro which was the agency contracting this survey, aimed at assessing the impact of a narrow transmission line corridor from the powerhouse at Devils Cove to Corner Brook.

Preliminary study of aerial photographs and 1:50,000 maps of the area as well as a preliminary helicopter reconnaissance in 1980 suggested that the corridor was unlikely to be productive of archaeological material since it does not approach the coast where archaeological sites are concentrated, since access from the coast is limited and difficult, and since the area traversed by the corridor is either rugged upland or low-lying marsh and bog. For these reasons it was decided to preceed an expensive and time-consuming ground survey of the 180+ km corridor by a low-level helicopter survey of the line following clearing but prior to the start of actual construction. This was carried out by Douglas Robbins during early November 1982.

The results of this survey were entirely negative. Careful inspection revealed not a single location likely to produce archaeological remains. The northern section of the corridor proved to be as inaccessable and rugged as predicted and the central area equally unsuitable since the transmission line passes almost entirely through bog and marshland. Even between Deer Lake and Corner Brook, where the route follows the west side of Deer Lake and the lower Humber River and where access is relatively easy and resources such as salmon are plentiful, the

transmission line is located on high rugged terrain, well away from the lake and river. Hence no locations of even moderate archaeological potential were observed.

For these reasons further archaeological work, including a ground survey, was not recommended.

MARY'S HARBOUR-LODGE BAY ROAD

In September, 1982 Memorial University was informed by the Planning and Research Division, Department of Transportation, Government of Newfoundland and Labrador, that a road connecting the Labrador communities of Mary's Harbour and Lodge Bay was about to proceed to the construction stage. Subsequently a survey of the area was carried out by Reginald Auger and Stephen Mills to determine: (a) whether any archaeological sites were threatened by actual road construction; and (b) to conduct a more general survey to locate sites which could then be marked and avoided during construction.

Two days were spent walking the right-of-way between Lodge Bay and Mary's Harbour. Although much of the area is boggy and unattractive, several areas where archaeological sites might conceivably have been present were noted, particularly along the bank of the Charles River at Lodge Bay. Despite a careful inspection of all natural exposures and test-pitting in areas where vegetation or other factors obscured the ground no traces of aboriginal or other remains were found.

The second part of the project was somewhat more successful, although no sites of significance were reported. An area near the school in Mary's Harbour where local residents reported finding a side-notched projectile point of glossy whitish chert was inspected and test-pitted but no additional cultural material was found. At a small site on the west side of the river about 100 m north of the bridge to Mary's Harbour about 130 flakes and three artifacts were recovered from patches of vegetation growing in cracks and fissures in the bedrock. The artifacts include: a flat, asymmetric biface of Ramah chert, probably of Palaeo-Eskimo origin; a fragment of a second Ramah chert biface too small to allow even a guess at its cultural affiliations; and a thick ovoid biface of banded and speckled grey chert which may be of Indian manufacture. Little remains of this site and a systematic excavation is unlikely to be repaid.

Finally, at Burnt Point north of Mary's Harbour and on Great Caribou Island, boulder beaches proved to contain a number of large pits of uncertain function and containing no cultural remains. Those at Burnt Point are five in number, about 3 m in diameter and about 60 cm deep. At the latter location approximately 20 pits were observed in a boulder beach now about 12 m above sea level. These were somewhat smaller in diameter (c. 1.5 m) and deeper (c. 1.0 m) than those at Burnt Point, but yielded no more information as to their possible function or origin.

Since sites were found neither in the right-of-way nor in areas likely to be threatened by borrow pit or other construction no further work was recommended in this area.

SHAMBLERS COVE - GREENSPOND CAUSEWAY

Considerably more productive were survey and excavations carried out in connection with the construction of a causeway connecting Greenspond Island with the Island of Newfoundland at Shamblers Cove in Bonavista Bay. The area was identified by the Historic Resources Division, Department of Culture, Recreation and Youth as one of high archaeological potential, hence a contract was made between the Planning and Research Branch, Department of Transportation and Memorial University to conduct a preliminary reconnaisance in the area. The survey, carried out in June, 1982 by Reginald Auger and Clifford Evans proved that the assessment of a high archaeological potential was indeed accurate.

At Greenspond, which was settled as early as the late 17th or early 18th century, no material dating earlier than the late 19th century was recovered. However, since the survey was limited to a small portion of the island, it is expected that these results are not representative of the true archaeological potential of Greenspond Island.

At Shamblers Cove, however, surface collecting and test-pitting quickly produced evidence of not only recent European occupation but artifacts from Middle Dorset Eskimo, Groswater phase Palaeo-Eskimo, and Recent Indian habitation as well. Since at least three of the areas where this material was found appeared to be potentially productive of new information and were threatened with road construction, further excavations were carried out between August 1 and 19, again funded by the Department of Transportation. Fieldwork was directed by Reginald Auger, assisted by Allen Angeconeb, Trudy Butt, Carmen Cameron, and Karen Power.

Excavations were centered in the three areas designated 1, 5 and 7, which were immediately threatened by construction. A brief description of the results at each area follows.

Area 1 was identified by a scatter of flakes and artifacts of the Middle Dorset period, with a buried concentration of such material in a portion of the site. In this area 64 one metre squares were excavated to sterile subsoil or bedrock. In every square European disturbance was noted and a forest fire reported to have taken place in the 1940's further destroyed the context of the archaeological material. Artifacts from this area are predominantly of the Middle Dorset period including 11 harpoon end blades, 4 end scrapers, a biface knife, a tip-flute flake, 22 microblades, and a quartz crystal blade core. Evidence of other occupations includes two biface and one uniface fragments of possible Groswater phase origin, a flake scraper perhaps made by Recent Indians, a white glass seed bead identical to those recovered by Ralph Pastore (this volume) from a contact period Beothuk site in Notre Dame Bay, and a number of recent European objects.

Area 5 also produced primarily Middle Dorset material and a smattering of recent European artifacts. The latter were near the top of a humus layer up to 25 cm thick while the former were contained within a thin buried culture layer also containing a rock hearth which produced wood charcoal subsequently dated at 2340±60 B.P. (Beta-5372). This determination seems too old to be associated with the Middle Dorset triangular end-blades, side-notched knives, end scrapers, ground slate scraper (?), prismatic blades, and a quartz crystal blade core found in the same narrow occupation layer. It is discussed in somewhat more detail below.

Area 7 was the most productive of the three major areas systematically excavated during 1982. The stratigraphy was not unlike that in Area 5, in that most of the cultural material was compressed into a single narrow band. An exception was a lower humus zone, apparent only intermittently, but which contained a scattered hearth and wood charcoal dated at 3040±140 B.P. (Beta-5371). Both a Middle Dorset asymmetric knife and an ovate biface of Indian manufacture were found near this feature which is thought to date an early Indian occupation (again, see below).

Two other features were also recorded and dated. These include a probable scattered tent ring with a central hearth dated at 720±70 B.P. (Beta-5370).

Associated with this was a small stemmed projectile point similar to Recent Indian Little Passage complex material (Penney 1981). The third feature from Area 7 was also a rock hearth, this time in good association with Middle Dorset material which produced a date of 1890±100 B.P. (Beta-5369) which, while somewhat early, is not far removed from the bulk of Middle Dorset dates from the Island of Newfoundland.

Artifacts from this area were also more numerous than from other areas of the Shamblers Cove site. They include evidence of recent European, Middle Dorset, Groswater phase, and several Indian occupations.

The Indian material includes two side-notched projectile points (Plate 1a, b) of unknown cultural affiliations, a corner-notched example (Plate 1c) now attributed to the Recent Indian Beaches complex (Tuck n.d.), two Little Passage complex projectile points (Plate 1d), and the unique example illustrated on Plate 1e. Eleven bifaces or biface fragments include a variety of styles as shown on Plate 1f-l. A considerable chronological range for this material is suspected but the meagre sample and lack of good associations with C-14 samples render it impossible to be more precise at this time.

Ten artifacts from the Groswater phase of the Early Palaeo-Eskimo tradition, while small in number, provided a remarkably complete chipped stone inventory. They include: a side-notched, plano/convex end blade; a minute semi-lunar side blade; four bifaces; a triangular end scraper assigned to this culture by virtue of partial edge retouch on the ventral surface; two uniface knives, and a burin-like-tool. Most are illustrated on Plate 2. All are virtually identical to examples recovered elsewhere in Newfoundland (c.f. Auger 1982) where they have been dated between about 2500 and 2150 B.P. Moreover all are manufactured from the same fine-grained cherts as other Groswater phase assemblages from both Newfoundland and Labrador, which seem, at least on first inspection, to be remarkably similar to cherts from the Cow Head region in western Newfoundland.

In contrast to the small but representative collection of Groswater phase material the Middle Dorset collection from Shamblers Cove is large but not representative of other nearby Middle Dorset sites. Although the artifacts recovered at Shamblers Cove compare stylistically to those from the Beaches site some 30 km to the south (c.f. end blades on Plate 3), the relative frequencies of various functional classes vary considerably.

A distribution of the Shamblers Cove collection is as follows:

	f	%
chipped end blades	50	35.2
ground slate end blades	4	2.8
end blade preforms	9	6.3
tip-flute flakes	16	11.3
microblades	50	35.2
biface knives	8	5.6
scrapers	5	3.5
	142	99.9

Although figures from the Beaches site (Carignan 1975) are not strictly comparable a few estimates of artifact percentages are instructive. For instance:

chipped end blades = c.17%
ground end blades = c.0.6%
end blade preforms = c.38%
blades = c.14%
scrapers = c.16%

Comparing these two sets of figures it can be seen that hunting equipment is grossly over-represented at Shamblers Cove leading to the conclusion that in Middle Dorset times the site served as a seasonal hunting camp, probably for harp seals. Although lacking the faunal remains which might support this hypothesis, it seems clear that harpoon maintenance, the finishing of end blades from preforms, and butchering were important activities at Shamblers Cove. The high frequency of prismatic blades is slightly more difficult to explain although they could also have figured in the skinning and butchering process. Also, it seems as if other manufacturing and maintenance activities, such as those employing scrapers, gravers, hammerstones, etc. were not important at Shamblers Cove. Finally, the roughly similar artifact percentages from Area 1 suggest that the relative frequencies reported from this area are real and not a function of sampling error.

The dating program from Shamblers Cove requires a few words of explanation since two of the four dates obtained do not agree with the original assessment of their cultural affiliations. The dates obtained, with their original assessments are:

Date	Lab. No.	Area & Feature	Original Interpretation
1890±100	Beta-5369	A7-F1	Middle Dorset
720± 70	Beta-5370	A7-F2	Recent Indian
3080±140	Beta-5371	A7-F3	Middle Dorset
2340± 60	Beta-5372	A5-F1	Middle Dorset

Looking briefly at each date we can see that the first two are what archaeologists would call "acceptable" and the latter two "not acceptable" because they either fit, or do not fit, our preconceived notion of the culture history and chronology of an area. In this regard the date of 1890±100 B.P. (A.D. 60) needs little further comment since it is within the range for Middle Dorset culture to which it was originally attributed. It is, however, earlier than any Middle Dorset date from western Newfoundland where the most extensive dating program has been carried out. This may be explained by an hypothesis proposed by Douglas Robbins (personal communication) who suggests that the first Dorset Eskimo migrants to Newfoundland travelled along the east coast of the Northern Peninsula (rather than the west), hence we should expect to find the earliest sites and dates on the northeast coast. This hypothesis is intriguing and might explain two other early dates from Trinity and White Bays but at present can only be provisionally accepted since it requires further testing.

The second date, 720±70 B.P. (A.D. 1230), requires little comment as it accords well both with the initial appraisal of its association with Recent Indian material and previous determinations for the Little Passage complex. It adds Bonavista Bay to the list of areas where this complex has been dated which now includes Notre Dame Bay, Bonavista Bay, Trinity Bay, and the south coast of Newfoundland. Curiously absent from this list is western Newfoundland, particularly that area north of Bonne Bay which is well known archaeologically but has yet to produce any archaeological material more recent than about A.D. 1000.

The date of 3040±140 B.P. (1090 B.C.) requires some explanation. It was originally expected to date the Middle Dorset occupation and a reading of between 2000 and 1500 was anticipated. The assay of greater than 1000 B.C. is clearly too early, however, and it is difficult to imagine how some sort of contamination could be responsible for the old reading obtained. More likely, it seems that the compression of more

than 2,000 years of prehistory into a culture layer only a few centimetres thick has led to some confusion in interpretation. It seems probable that the date does reflect human habitation at Shamblers Cove more than 3,000 years ago. The question of just what group was responsible for the construction of this hearth is difficult to answer but a clue may be provided by a single white chert biface which was associated with the feature. It may be, therefore, that this relatively early date pertains to an Indian, rather than Palaeo-Eskimo, occupation of Shamblers Cove. It would be gratifying if the two side-notched projectile points suspected on stylistic grounds to date from about this time, had been found near this feature. Unfortunately they were not, so the question of which archaeological culture this feature dates must remain unanswered unless further work is undertaken at Shamblers Cove.

The final date obtained, 2340±60 B.P. (390 B.C.) also requires some explanation. At the time of collection it, too, was expected to date the Middle Dorset occupation. Once again, however, the date appears too early, this time by at least 3-400 years. The date would be quite acceptable for the Groswater phase component described above, but unfortunately the entire assemblage comes from Area 7, hence there is no association.

In summary, then, the radiocarbon determinations from Shamblers Cove do not present the coherent picture we would have liked. Despite this, however, they are an interesting series for they do suggest the possibility of Indian occupation around 3000 B.P , a relatively early date for Middle Dorset on the northeast coast, and provide an additional chronological determination for the Recent Indian Little Passage complex.

In summary, then, the Shamblers Cove site provided evidence of occupation by at least two Indian and two Palaeo-Eskimo groups in addition to the recent European habitation. Although restricted to areas directly threatened by road construction the amount of information recovered was considerable, particularly that pertaining to the special purpose hunting camp of the Middle Dorset period. A significant portion of the site remains unexcavated and test pitting indicates that sizeable buried components exist in these areas. For this reason, and because the locations of these areas are now well-known, it has been recommended that excavations at Shamblers Cove continue, to prevent the loss of this potentially important information.

BROOM POINT

Surveys conducted in western Newfoundland during the mid-1970's revealed evidence of a Middle Dorset Eskimo component eroding from beneath a small fishing store at Broom Point in Gros Morne National Park. In connection with a program of interpretation involving human exploitation of marine resources Memorial University was contracted by Parks Canada to undertake preliminary excavations during 1982. These were carried out in May and June under the direction of Reginald Auger assisted by Stephen Mills, Perry Moulton, and Lloyd St. Croix.

Extensive test-pitting showed the site to be much larger than originally estimated and now seems to include some 400 m^2 of cultural deposits. Excavations were concentrated in two areas. Stratigraphy at each is described briefly below.

Area 1 included a modern sod and brown humus zone containing objects of recent European origin, and a thin dark ancient humus with prehistoric material overlying the sterile beach gravel.

In Area II the stratigraphy was essentially the same with the addition of a thin lense of fine gravel between the recent humus and the prehistoric culture layer. This is interpreted as resulting from the excavation of a shallow depression by Middle Dorset people.

A single feature, in the form of a concentration of charcoal and burned earth was revealed immediately atop the beach gravels in Area I which yielded a C-14 date of 2285±100 B.P. (Beta-4770). While this is earlier than the Middle Dorset occupation which dominates the artifact collection, it may be explained by the presence of a chipped and ground burin-like tool, a bifacially trimmed end scraper, a thin asymmetric knife, and a thin "blank" with broad, flat surface flaking, all characteristic of the Groswater phase of the Early Palaeo-Eskimo tradition (c.f. Auger 1982). The date of 335 B.C. is in accordance with similar determinations from the nearby Factory Cove site and probably pertains to a brief occupation by these Palaeo-Eskimo people.

In Area II two features were recorded. The first may be the remains of a tent ring which was scattered during construction of the shed where the site was first observed. The second was a similar feature, between 3.8 and 4.0 m in diameter within which were two concentrations of wood charcoal suggesting small hearths. A sample from one of these concentrations was dated at 1650±90 B.P. (Beta-4771) which agrees closely with numerous

other Middle Dorset dates from western Newfoundland.

The artifacts from Broom Point, except for the four Groswater phase specimens mentioned above, include virtually a full range of chipped and ground stone tools and weapons. Frequencies and percentages of each class are shown in Table 1.

TABLE 1

class*	f	%
chipped end blades	20	10.4
ground end blades	1	0.5
biface knives	6	3.1
end scrapers	22	11.5
side scrapers	2	1.0
burin-like tools	5	2.6
burin-like tool preforms	1	0.5
prismatic blades	68	35.4
blade cores	8	4.2
flake cores	14	7.3
blanks	14	7.3
preforms (end blade)	6	3.1
tip-flute flakes	13	6.8
hammerstones	12	6.3
	192	100.00

*"retouched flakes" (n=8) and "utilized flakes" (n=27) are not included in these calculations.

Since in almost every case these artifacts compare closely with Middle Dorset specimens described elsewhere from western Newfoundland, individual descriptions will be omitted from this report. Instead some general comments on particular classes or individual specimens are offered in lieu of the tedious detail which can be found in the complete report.

End blades, with the exception of two notched examples (Plate 4c, d) are triangular in form and most are tip-fluted. Two are minute examples made from reworked tip-flute flakes as shown on Plate 4a, b. The single ground slate example (Plate 4k) is also typical of Middle Dorset examples usually identified as lance points.

End scrapers are triangular in form, unifacially flaked and have convex working edges with angles between 70 and 80 degrees.

"Knives" are all fragmentary but seem to conform to the asymmetric,

side-notched specimens from other sites of the same period.

In contrast to Groswater phase burin-like tools the Broom Point specimens are made from black to greenish nephrite, often banded, which may derive from the outcrops at Trompe l'Oeil in Pistolet Bay (Robert Stevens, personal communication). They are almost completely ground and equipped with notches for hafting.

Blades and blade cores are of both fine-grained cherts and quartz crystal and none shows any evidence of hafting modification or obvious use wear.

Blanks include bifacially flaked cores or flakes of high quality cherts not yet far enough along in the manufacturing process to indicate their intended form while preforms include triangular artifacts in process of being reduced by tip fluting which were intended as harpoon end blades.

Two retouched flakes were roughly side-notched for hafting while the remainder showed purposeful(?) flaking on one or more edges.

The entire assemblage is typical of Middle Dorset culture in western Newfoundland, at least insofar as this may be ascertained without a detailed comparison with other collections. It might be noted in passing that such a detailed study is long overdue particularly since recent excavations elsewhere on the Island have indicated some significant regional differences in Middle Dorset culture (c.f. Robbins, 1982) which require clarification and explanation.

Finally, it seems as if the Broom Point site represents a small encampment of Middle Dorset people whose equipment included all those chipped and ground stone tools and weapons necessary for maintenance and survival. More precise information is doubtless available at Broom Point but only additional excavation will make it available to us, perhaps as a beginning of the detailed investigations of Middle Dorset culture mentioned above.

In conclusion, thanks are offered to the Department of Transportation, Newfoundland and Labrador Hydro, Parks Canada, and to those individuals from these organizations who made these researches possible. Contract archaeology during 1982 was successful in salvaging material and information threatened by construction activities, in providing new pieces to the puzzle of Newfoundland and Labrador prehistory, and in providing "working capital" for Memorial University which will use the profits from these contracts to pursue researches elsewhere in the province.

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PLATE 1

Indian artifacts from Shamblers Cove:

a,b side-notched projectile points
c Beaches complex corner-notched projectile point
d Little Passage complex projectile point
e unique stemmed projectile point
f,g ovate bifaces
h-l miscellaneous bifaces

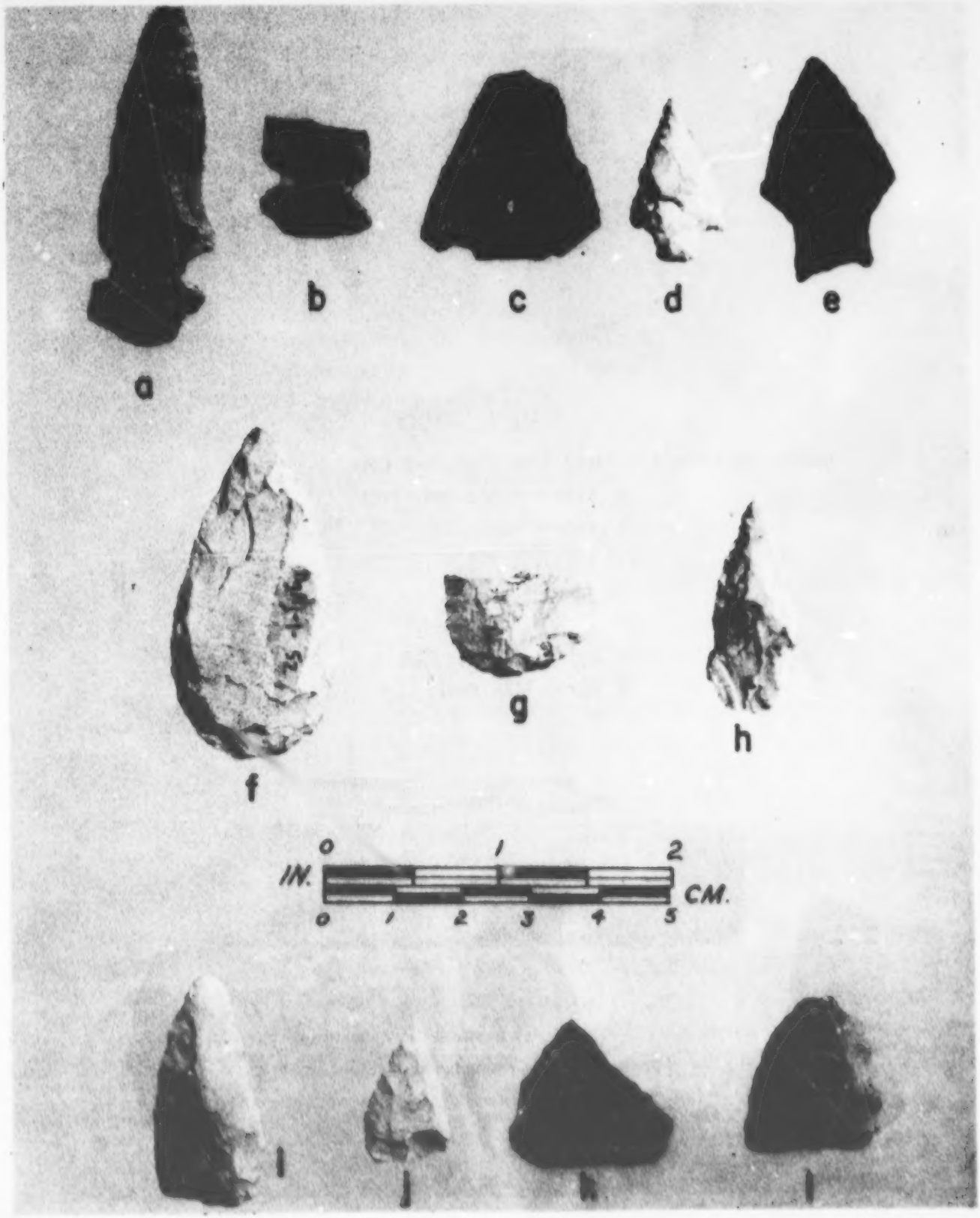
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PLATE 2

Groswater phase artifacts from Shamblers Cove.

a side-notched end blade;
b side-blade;
c-f bifaces;
g scraper;
h flake tool;
i uniface tool;
j burin-like tool.

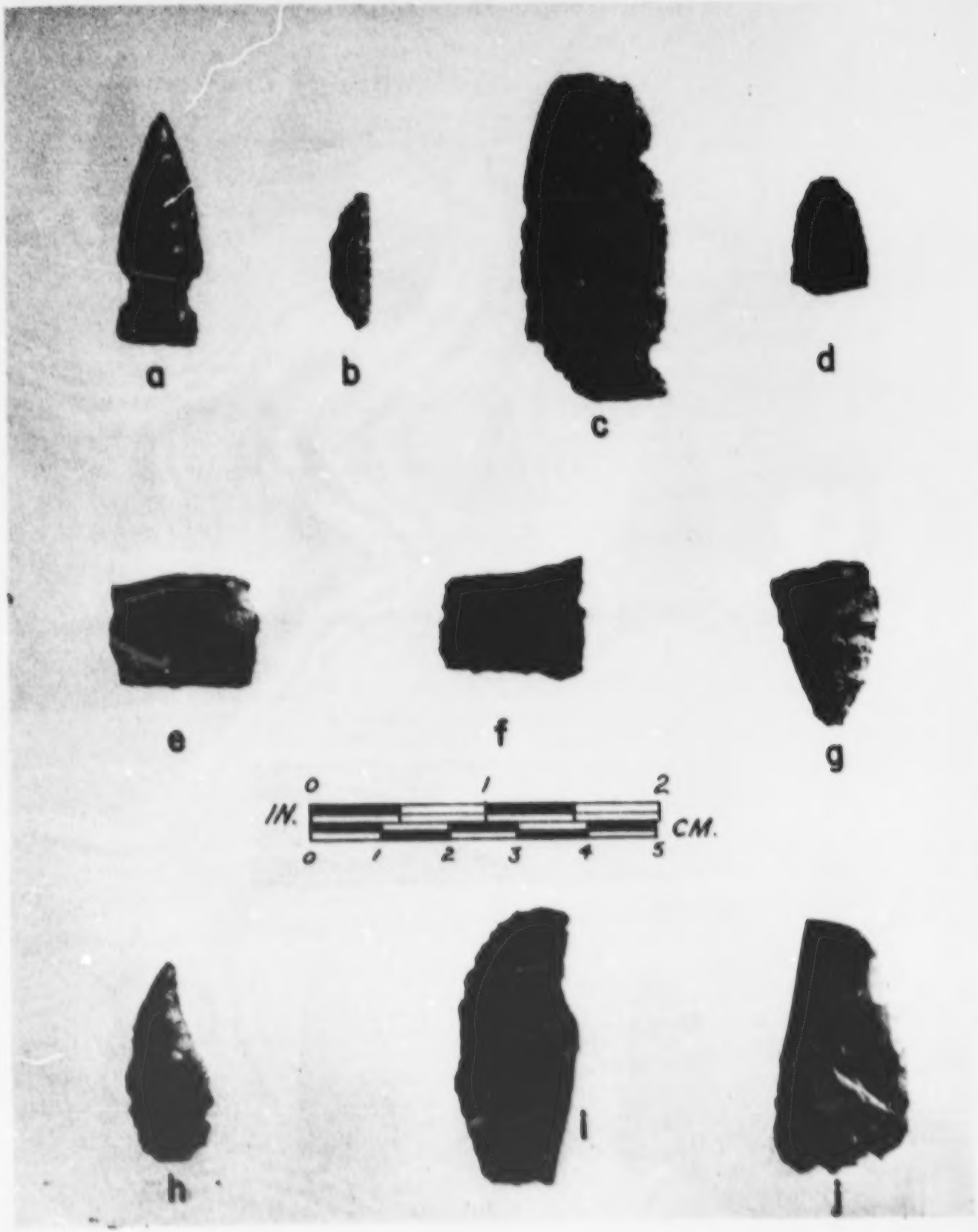
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PLATE 3

Triangular Middle Dorset harpoon end blades from Shamblers Cove.

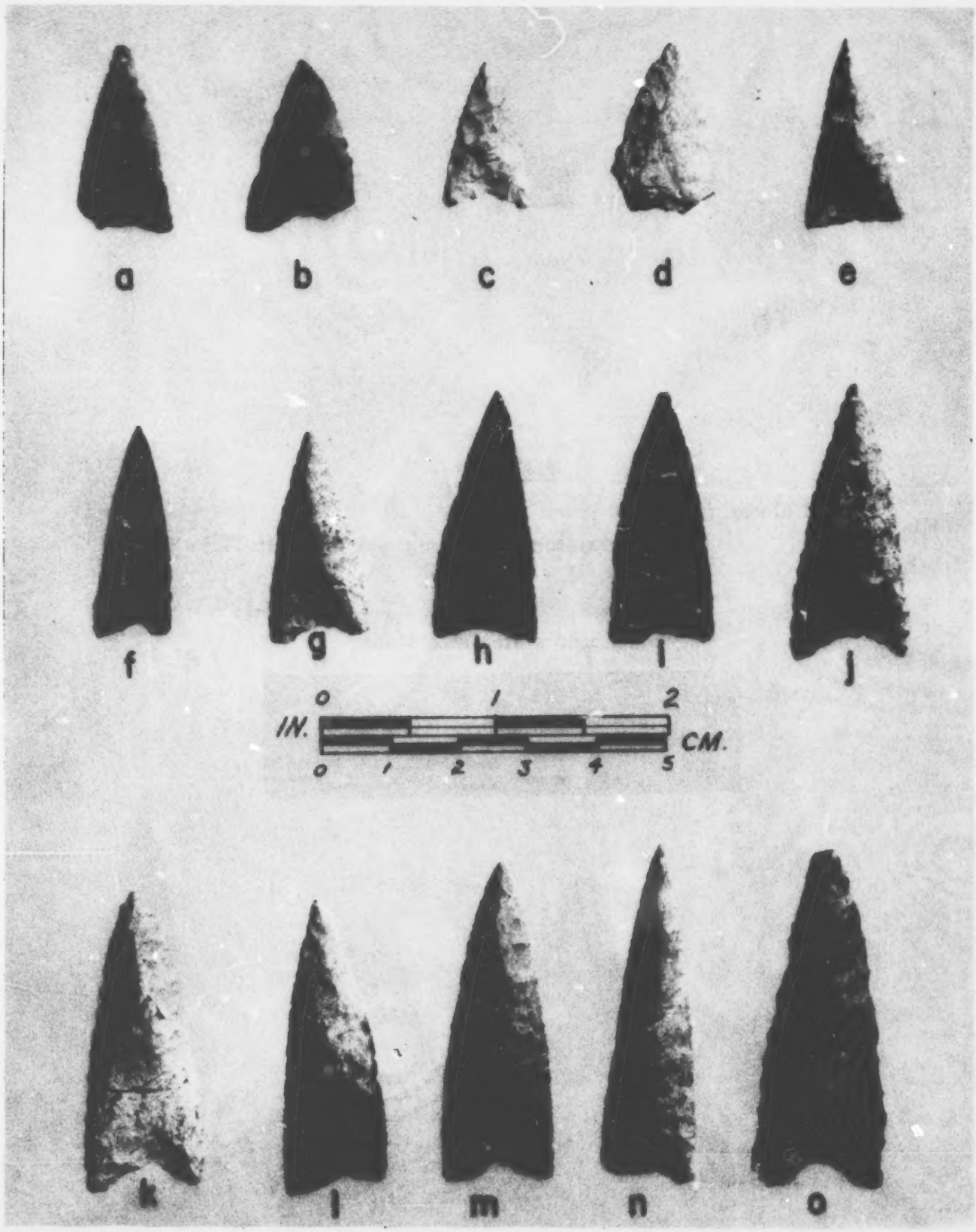
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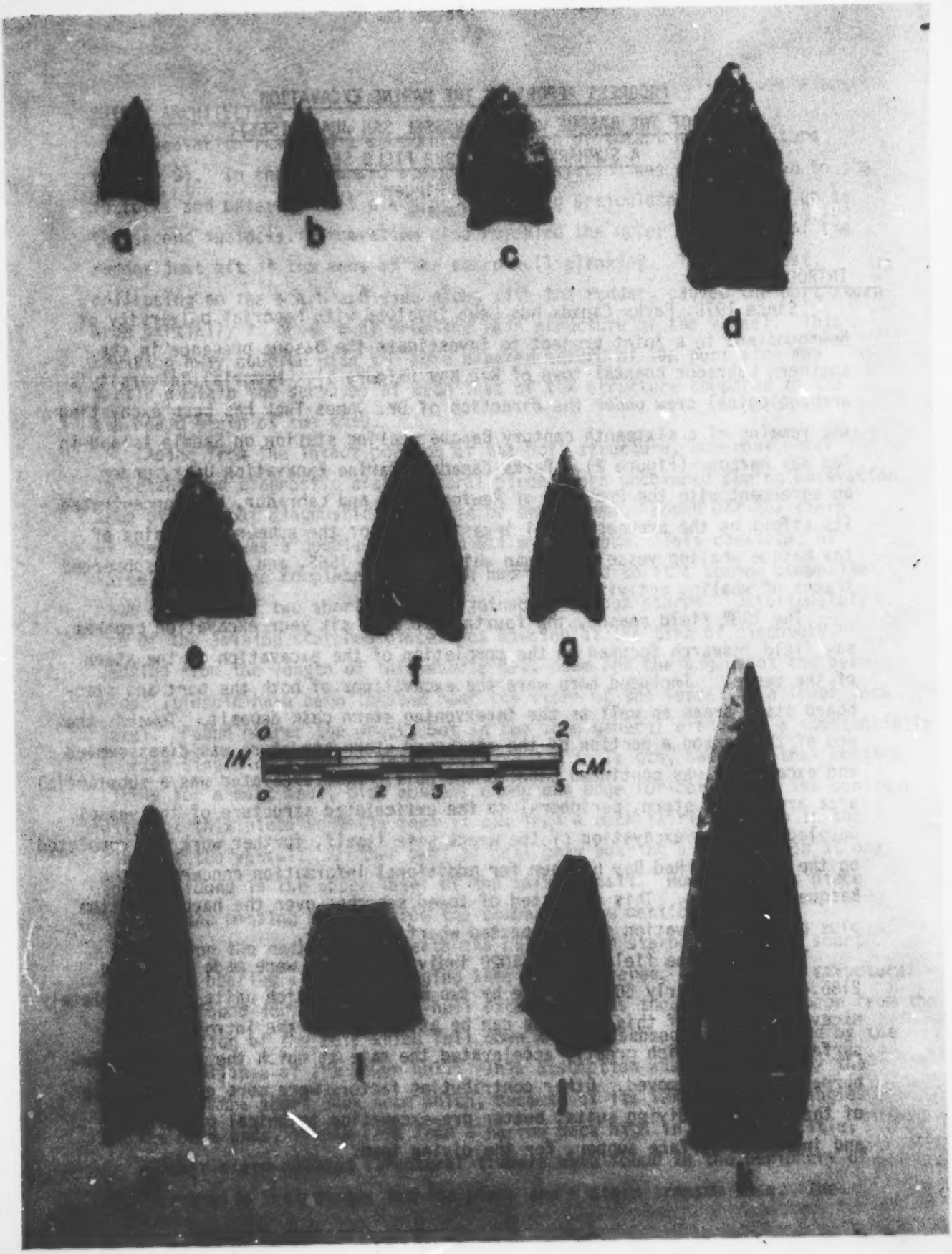
PLATE 4

End blades from Broom Point.

a,b miniature end blades made from tip-flute flakes;
c,d notched end blades;
e-j Middle Dorset triangular end blades;
k ground slate lance blade.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PROGRESS REPORT ON THE MARINE EXCAVATION OF THE BASQUE WHALING VESSEL SAN JUAN (1565): A SUMMARY OF THE 1982 FIELD SEASON.

R. James Ringer
Parks Canada

INTRODUCTION

Since 1979, Parks Canada has been involved with Memorial University of Newfoundland in a joint project to investigate the Basque presence in the southern Labrador coastal town of Red Bay (Figure 1). Memorial University's archaeological crew under the direction of Dr. James Tuck has been excavating the remains of a sixteenth century Basque whaling station on Saddle Island in Red Bay harbour (Figure 2). Parks Canada's Marine Excavation Unit, under an agreement with the Province of Newfoundland and Labrador, has concentrated its effort on the archaeological investigation of the submerged remains of the Basque whaling vessel San Juan which sank in 1565, and on other submerged traces of whaling activity.

The 1982 field season, the fourth year of a six year excavation program, saw field research focused on the completion of the excavation of the stern of the vessel. Included here were the excavations of both the port and starboard stern areas as well as the intervening stern cask deposit. Towards the end of the season a portion of the starboard stern structure was disassembled and excavation was continued beneath the hull. Also excavated was a substantial area around the stern, peripheral to the articulated structure of the vessel. Coupled with the excavation of the wreck site itself, further work was completed on the survey of Red Bay harbour for additional information concerning the Basque occupation. This consisted of towed searches over the harbour bottom plus partial excavation of a suspected wharf structure.

Throughout the field season 1029 individual dives were made totalling 2185.4 hours. Nearly 50 two metre by two metre excavation units were completely excavated. Much of this increase can be attributed to the introduction of surface screens which greatly accelerated the rate at which the surface overburden could be removed. Other contributing factors were more extensive use of the hot-water diving suits, better pre-excavation technical preparation and increased surface support for the diving team.

SHIP'S ARCHITECTURE

Excavation revealed a substantial portion of intact hull structure (Figure 3). In the starboard stern area, excavation was carried down to the futtocks and exterior hull planking, revealing articulated structure up to the second futtocks. Excavation also revealed the upper broken end of the rudder just aft of the ends of the stern hull planking. The sternpost, collapsing to the starboard side along with the rudder, caused the port stern area partially to break away from the main structure of the vessel. This breaking away coupled with the more exposed nature of the port side may partly explain the survival of much less of the structure compared to the starboard stern of the ship.

Aside from the intact portion of the hull structure, numerous other important and diagnostic architectural pieces were uncovered during excavation. Some of the most diagnostic consisted of deck beams. Found off the stern of the vessel was a double deck beam 5.1 m in length. This consisted of three pieces; one complete beam which had fastened to it a second composite beam composed of two shorter pieces joined by a hook scarph. Unfortunately one of the joining scarphed pieces was missing at the time of discovery. Judging from the length of this double deck beam and the angles at the beam ends, it would have been located near the stern of the vessel at a lower deck level. Found nearer the wreck, but in the same general area, was a substantially shorter single deck beam. This timber, 3.7 m in length, had a central mortice, likely for a mast heel, plus notches along one edge for carlings. The configuration of this piece suggests that it was from a deck fairly high up in the stern of the vessel. Another partial deck beam bearing a hook scarph at one end was found in the upper level of the cask deposit. However, this piece was not the missing portion from the compound beam mentioned above.

During the excavation beneath the hull of the starboard stern a short deck beam bearing a partial hanging knee was uncovered. The mass of structural material found during the under-hull excavation was thought to have been from the upper portion of the ship which fell down and was subsequently covered by the outward collapse of the lower hull. This assumption was reinforced by the finding of the short deck beam which, because of its length and the angles of the beam ends, likely came from a narrow deck high in the sterncastle.

Other stern-related structural timbers were found in the periphery of the wreck site including a fashion piece and a stern transom knee. The

fashion piece was from the starboard side of the transom and was important as it was more complete than its port counterpart found last year. With the finding of the second fashion piece, the transom structure is now substantially complete. The stern transom knee, likely from the starboard side of the vessel, seems to be the mate of a similar transom knee found two years ago on the port side.

On the stern starboard side of the site two interesting structural features were found just beyond the edge of the coherent hull structure. One of these was a long slightly curving beam which could have been a vertical skid or fender. The other piece was a plank and frame structure which may have been a type of sliding door or hatch cover.

Last year a long circular timber was partially uncovered off the port stern. This piece was totally uncovered this season. Thought to have been a mast this piece was 7.5 m long, slightly tapered, and more oval-shaped than circular in cross-section. Evidence revealed that it had been chopped through on both ends leaving no indication of how it might have been stepped. This may have resulted from the subsequent salvage attempts made on the vessel. The only indications of fittings were two small wedge-shaped wooden objects which seemed to have been nailed to the mast.

Important discoveries made this year include most of the remaining components of the capstan assembly. One of these components was half of the lower bearing block or step which was recovered from the upper level of the cask deposit. The badly eroded other half of the step was discovered during a previous season but was only identified when compared to the one found this year. Found on the port side was one of the capstan partners which would have supported the barrel of the capstan as the shaft passed through the deck. The other capstan partner was uncovered beneath the hull structure on the starboard side. With the previous finding of the capstan and now the capstan partners and the lower step all in the stern, it is fairly conclusive that the capstan was mounted in the after part of the ship.

SHIP'S FITTINGS

Besides significant structural pieces, this year's excavation has also produced numerous important rigging elements. Most of these came from the under-hull excavation in the starboard stern area. Recovered here were two types of blocks, a fiddle block and a single-sheaved block, not found previously on the site. The single-sheaved block was similar to other recovered blocks

except that it had two strop holes instead of one spiralling through the top of the block (Figure 4). Also found was a short beam, bearing a single sheave, which may have been a type of knightshead or kevel block (Figure 5). From this area as well were a number of closely grouped heart blocks, some with the more common rope stropping but others having evidence of metal banding. Based on this and the lack of deadeyes, it seems that pairs of heart blocks were used instead of deadeyes to adjust the tension on the mizzen shrouds.

Ship's fittings from the other excavated areas proved to be nonexistent except in the peripheral area. The objects here consisted of a pulley sheave, a single-sheaved block with rope stropping similar to the one found under the starboard side, and a parrel fragment which because of its small size and surface contexts may not be from the San Juan.

OTHER ARTIFACTS

Besides fittings, excavations have produced a number of new artifacts as well as an abundance of more common artifact types and faunal remains. Common and prolific materials in the peripheral areas, and to a lesser degree in the other excavated areas, include whale bone, coopering debris, ceramic roofing tile fragments and fish bone which were deposited as a result of activity from the shore station. The faunal remains and the cask deposit will be dealt with more fully below.

Excavation around the stern of the vessel uncovered many of the more unique artifacts, including a variety of coarse earthenware vessel fragments consisting of rim parts, strap handles, base and body sherds which will add greatly to our knowledge of ceramic vessel types used both on the ship and on the shore station. Until this year ceramic vessel fragments from the site were extremely rare.

Other artifacts from the peripheral area consisted of numerous leather artifacts and fragments including identifiable shoes and shoe parts as well as a number of leather sheets and strips. Because of the presence of stitching holes in some of the sheets they could be parts of garments. Wooden artifacts included two finely turned wooden bowls (Figure 6), plus an unusual unidentified carved object. Other recovered wooden artifacts were two tool handles with associated concretions. One of these appeared to be an axe handle fragment while the other was the tip of a harpoon shaft or similar lance-type instrument.

In both cases the concretions were in very poor condition resulting in only partial recovery. An intriguing find, off the starboard side of the vessel, was that of a tightly and finely woven mat of organic fibre (Figure 7). Although its use has yet to be determined it may have functioned as a type of mattress or as a cargo packing mat. Identifiable metal artifacts are very rare on the site but the finding of the handle and lid assembly from a pewter tankard has demonstrated the survival of such objects (Figure 8).

Inside the ship, a number of important artifacts were recovered during the excavation of the stern cask deposit. One of the more interesting was what seemed to a cask hooping tool used in levering wooden hoops onto a cask (Figure 9). A common item in the cooper's tool kit, its use is well documented in sixteenth century illustrations. Another find was a cork sheet with a small hole in it the size of sampling hole plugs found in most of the casks. These two artifacts along with a nearby discovery of an unused wooden cask hoop suggest the possibility that some cask maintainenance activities were carried out on board the vessel. Other notable finds from the cask deposit included a single lead shot and the broken but complete remains of a finely decorated majolica porringer.

The collapsed and deteriorated nature of the port stern has resulted in a paucity of artifactual material. Most of the artifacts consisted of the badly disturbed and scattered remains of casks from the stern cask deposit along with a number of cask stowage articles. Unusual material consisted of fragments of organic matting, leather, ceramics and a partial heart block.

Artifacts encountered during the initial excavation of the starboard side above the hull planking included an abundance of ceramic vessel fragments, a number of pewter fragments and a turned wooden bowl. After the disassembly of the starboard hull, several intriguing artifacts were also recovered beneath the exterior planking. Besides a good collection of ceramic and pewter vessel fragments, unique complete artifacts such as a possible game board were recovered as well (Figure 10). The board consisted of an incised grid with alternate squares containing incised "x's" in a checker board pattern. The board, crudely manufactured from a reused plank, contained a number of obvious errors and superfluous grafitti. Another unique find was that of the fragmentary remains of a wooden log reel around which would have been wound the knotted log-line used to measure the speed of the ship (Figure 11). The retrieved parts included the two circular end pieces, the central axel and the partial

remains of the framing spindles (Figure 12). Associated with the log reel was the wooden frame of an hourglass that would have been used to time the reeling off of the log line. This artifact is still *in situ* but appeared to be broken as well. Both of these finds will greatly enhance our knowledge of sixteenth century Spanish navigational instruments and practices.

CASK DEPOSIT

The excavation of the cask deposit in the central portion of the stern structure comprised one of the major components of the total stern excavation. The cask deposit, as originally found, consisted of a mounding up of casks towards the centre line of the vessel. Excavation revealed that most of the casks were situated on the starboard side with only scattered remains on the port side. Fifteen complete or nearly complete cask assemblages were excavated from the stern section; all *barricas*. *Barricas* represent the predominant size of cask found on the site to date. Incomplete remains of smaller capacity casks were found mainly from the top of the cask deposit. One stave from a cask substantially larger than a *barrica* and tentatively identified as a *pipa* was recovered just aft of the stern cask area.

All of the casks were stowed horizontally in a fore-aft position with the bung stave uppermost. In the deposit there were three rows of casks laid across the hull in the ground tier (Figure 13). Excavation revealed that there were at least three distinct tiers or layers of casks. The casks were stacked in rows with each successive tier offset and between the casks below it, forming an interlocking network. This pattern was precisely that encountered during the excavation of the midship cask deposit last year.

The cask excavation revealed new information on the various uses of wooden chocks, billets and wedges in supporting the cargo of casks. In the midsection, the ground tier casks were supported between rows of ballast stone, however, in the stern, casks were generally supported by wooden stowage articles. In one case a cask was supported by two billets placed along either side with a diagonally placed square timber beneath the cask. To date this is the only instance of an attempt to keep a cask free of the bottom of the vessel. In all other cases the ground tier casks rested directly on the ceiling planking or the futtocks. The purpose of cask support seemed to be primarily to prevent sideward rolling of the casks. This was illustrated in the stern where a billet with a wedge-shaped end was placed athwartships with the wedge part supporting the lower portion of a cask.

The lack of ballast bed supports for casks in the stern meant a great deal less ballast stone was found in this area. Virtually no ballast was found between the futtocks beyond the ceiling planking as was the case in the midship area. The recovered ballast seemed to be used principally to fill gaps in the cargo of casks.

A most interesting discovery, uncovered just aft of the stern cask deposit, was that of a large concentration of billets (Figure 13). These billets seemed to have been originally stacked arthwartships. Intermixed with the billets were a number of other smaller stowage articles, such as wedges and chocks, which suggests that the concentration represents pieces left over from the cargo-lading process rather than firewood. The wood probably represents dunnage placed here to support the back wall of the casks.

STRATIGRAPHIC CONSIDERATIONS

The stratigraphic sequence outside the main wreckage at the stern of the vessel is now fairly clear. It consists of a layer of recent sand overburden, 15 to 50 cm thick; underlain by an organic stratum 30 to 50 cm thick, consisting of silt, wood chips, twigs and sphagnum moss; followed by a layer of sterile grey sand. The organic layer, which has contained the bulk of artifacts, can be considered as the major Basque cultural statum. It seems certain now that much of the Basque deposit accumulated as a result of slumpage from nearby Saddle Island and therefore represents secondary deposition. During this year's excavation a new stratum, consisting of a dark silt intermixed with large quantities of crushed barnacle shell, appeared very near the stern wreckage and extended under the wreck itself. This crushed shell layer contained structural pieces, elements of the rigging and numerous artifacts. As this stratum lay between the organic layer and the sterile grey sand it thus represents the first cultural deposit from the site. It is thought that the barnacles were attached to the vessel at the time of the sinking or became attached shortly afterwards. This being the case the crushed shell stratum can be fairly precisely dated. As a result important analytical statements concerning the rest of the stratigraphic sequence will be possible.

SMALL BOAT

Last season the remains of a small boat was found near the stern of the San Juan. It was originally planned to complete the excavation this year but after further excavation it was discovered that the boat ran underneath

the rudder and the starboard stern hull. The starboard stern would have to be entirely dismantled, then the rudder raised before excavation could be completed. However, the partial remains of a second small craft were uncovered during excavation off the stern of the vessel.

The boat when discovered had a layer of ceramic roofing tile fragments packed tightly between its frames. These tile fragments were much larger than those normally found on the site which suggested intentional placement, for example as cargo or ballast. Its precise function, however, is unknown. After removing the ceramic fragments, the boat remains were seen to measure 3.8 m long by 1.5 m wide (Figure 14). The boat was not complete but portions of the keel, planking, floors and futtocks from one side survived. The surviving structure, it was estimated, represented approximately half the total length of the boat.

The boat was constructed from hardwood, possibly elm. The structural pieces were fastened together principally with treenails with a minimal use of iron fastenings. Notable architectural features consisted of waterway channels cut through the floors above the keel and a plain vertical scarph joining two sections of the keel itself.

The finding of the boat within the Basque cultural deposit, with structural remains of the San Juan both below and above it, indicated that the small boat was deposited sometime after the initial sinking of the San Juan, but before the total collapse of the larger vessel. Given that the boat is Basque, the remains could represent those of a harbour work craft or alternatively those of a chalupa, the small vessels used by the Basques to hunt whales. Comparison with the other small boat and further archival research should help to clarify the identification.

FAUNAL MATERIAL

This season, as during previous years of excavation, whale bones continued to represent a considerable proportion of the finds. These bones were most often found around the periphery of the main wreck site and included examples from both Right and Bowhead whales. Significant discoveries included two nearly complete articulated flippers. One of these was found near the starboard stern while the other was uncovered partially beneath the excavated small boat. Besides these articulated flippers, numerous elements from disarticulated flippers were also uncovered. Included among the other whale bone finds were numerous

caudal vertebrae, rostrum fragments and mandibles. The abundance of flipper and caudal elements offer further support to the hypothesis that the whales' flippers and tails were removed at the onshore cutting-in stages as initial step in the processing operation. Further, the occurrence of skull and jaw remains points to the possibility that baleen removal was practised by the Basque whalers.

Besides the whale bone, other recovered faunal remains included a variety of waterfowl including loon, eider, herring gull and white-winged scoter. A particularly intriguing find was the bone from a Great Auk, which bore butchering marks. The Great Auk, a large flightless bird, was hunted to extinction by the middle of the nineteenth century. The rest of the faunal collection was comprised of a large quantity of cod fish bone plus examples of pig, harp seal and polar bear bone. All of the above faunal remains represent animals that were likely used as food resources. Although the precise utilization pattern is not known it can be seen that the Basques had access to a good deal of variety in their dietary resources.

HARBOUR SURVEY

In 1982 the underwater survey of Red Bay harbour was continued. This year, towed underwater searches were conducted as the most efficient way to survey a large area in a short period of time. Several survey tracks were searched along Saddle Island, between Saddle Island and the mainland, and along the mainland (Figure 2). Significant finds from the survey consisted of four large concentrations of whale bone and ceramic roofing tile fragments, all located off the mainland shore. These concentrations likely indicate intensive Basque activity along the corresponding shoreline, and will most probably be evidenced by the remains of oven complexes and other associated structures.

Another component of the harbour survey was the partial excavation of a possible Basque wharf structure, a timber and rock structure located in front and to the side of one of the oven complexes on Saddle Island. The structure consists of a main frame of two parallel logs with an attached cross piece. The floor is made up of five smaller evenly spaced logs within the framework. The whole structure was then covered with ballast rock. One of the main frame timbers has a mortice cut into it obviously to support a vertical timber. The entire structure has yet to be excavated so the wharf interpretation is only tentative.

FUTURE PLANS

Work on the San Juan site will continue over the next two years. A high priority has been placed on the disassembly and excavation beneath the rest of the starboard side of the vessel since the discovery of major architectural pieces and artifacts beneath the hull of the starboard stern area. Further excavation plans also include the complete exposure of the bow area coupled with the removal of the bow cask deposit. As well, further work will be undertaken on the survey of the harbour, both by expanding the survey area and by investigating the features already found. The continuation of the Red Bay project should provide considerably more insight not only into sixteenth century Spanish ship architecture but also into shipboard life and the other activities of the Basque whalers in Red Bay.

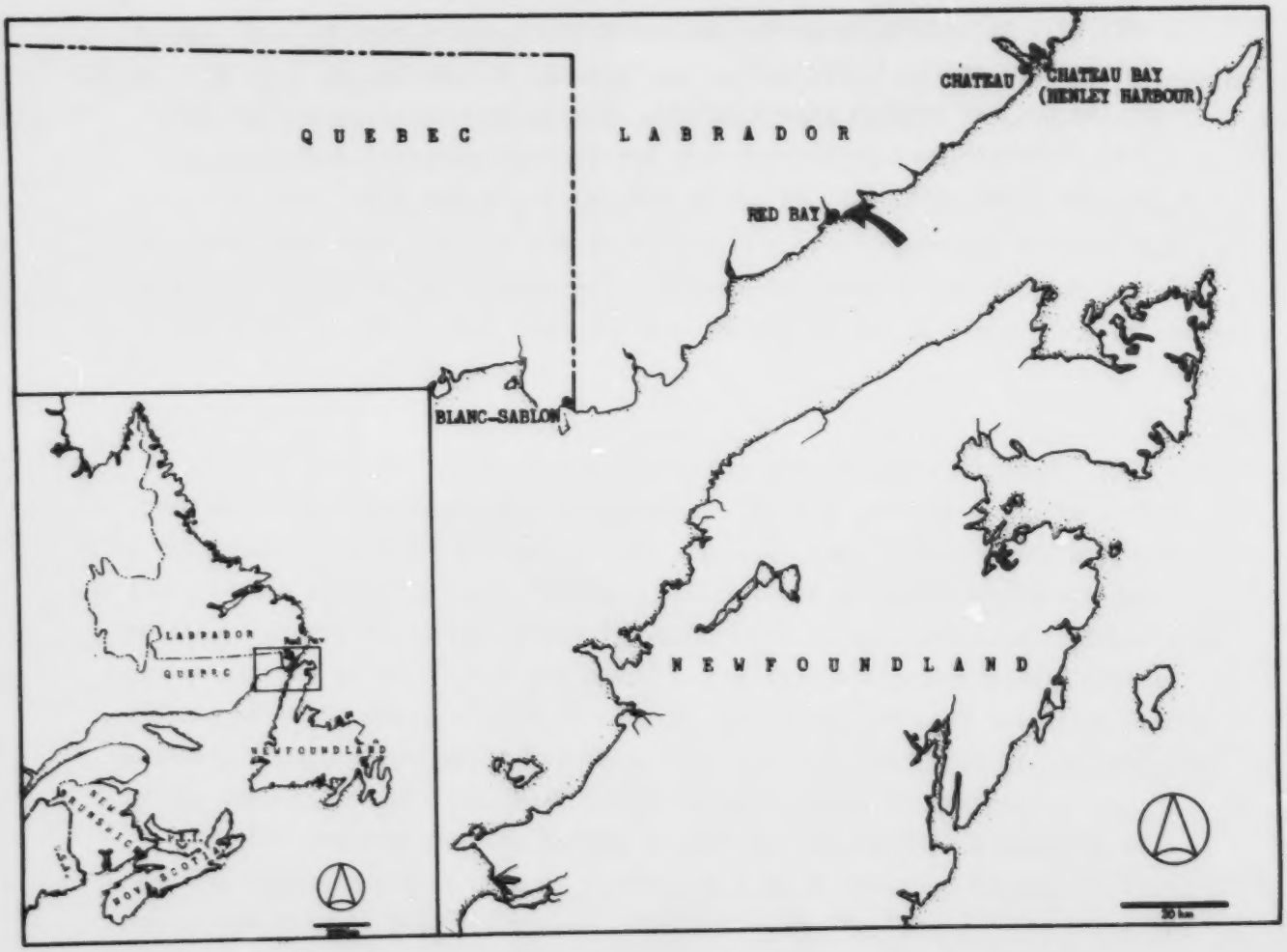

FIGURE 1
Locational map of Red Bay

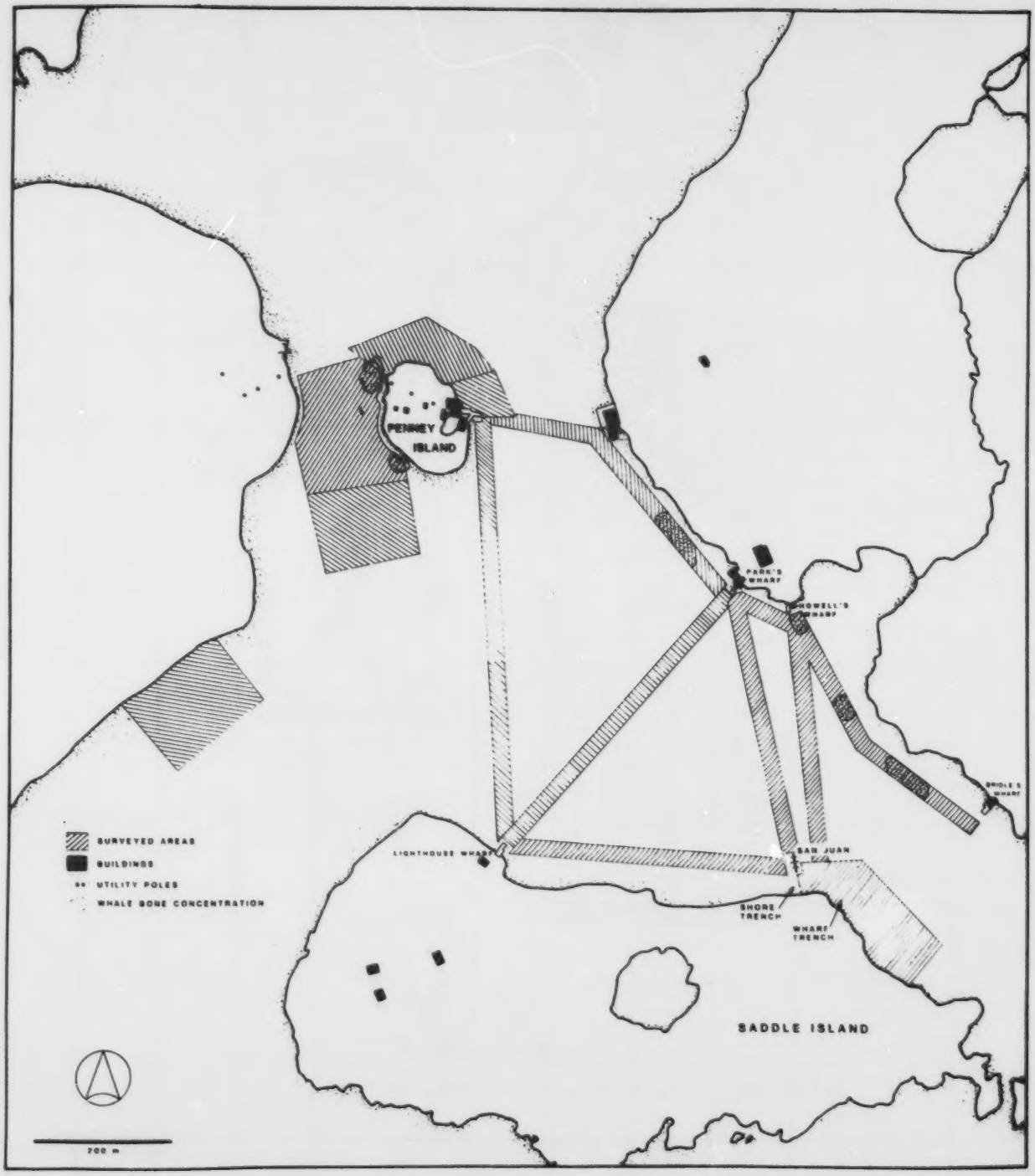

FIGURE 2

Map of the harbour of Red Bay showing location of the San Juan, wharf trench and areas surveyed.

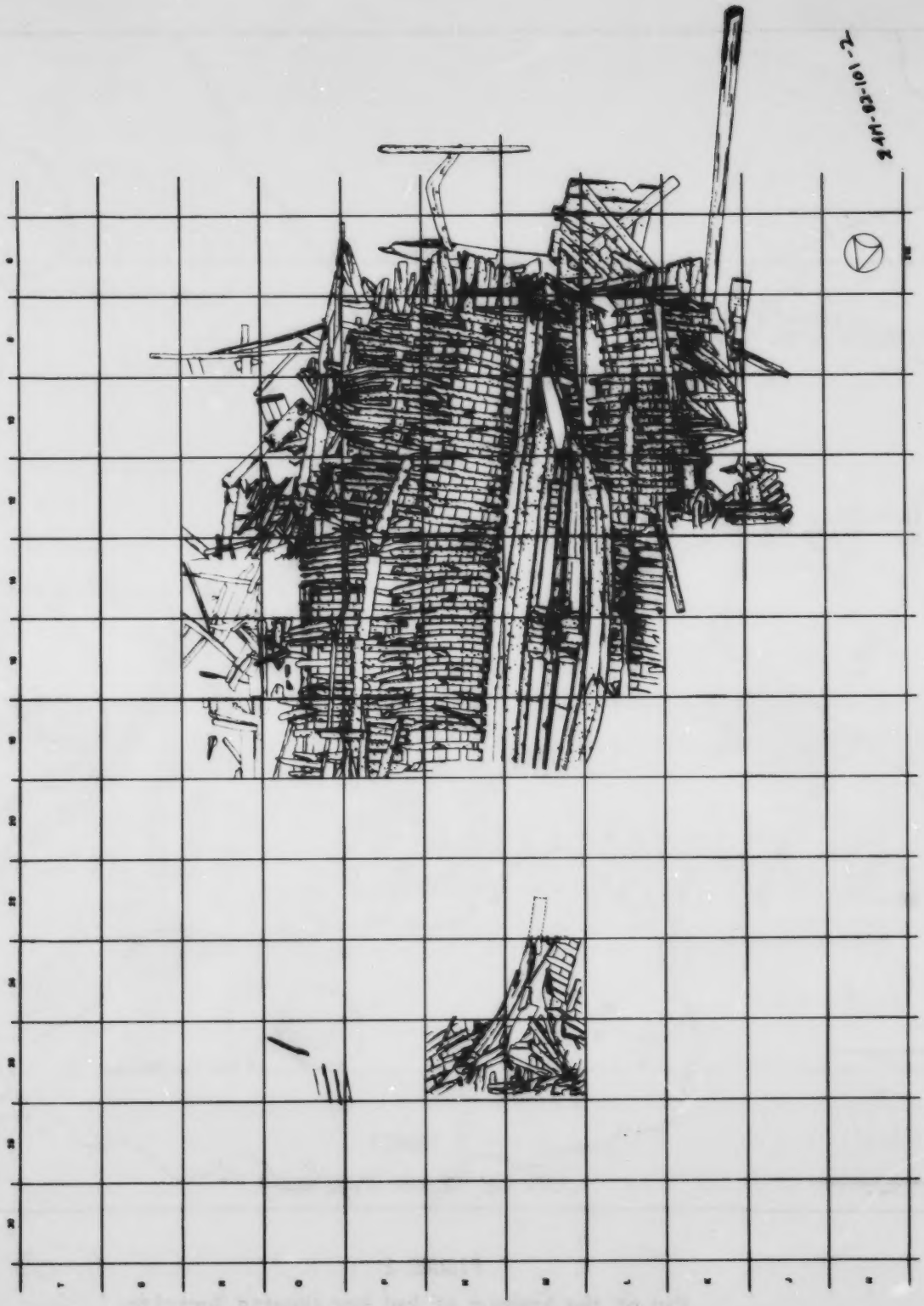

FIGURE 3
Single structural plan of the San Juan

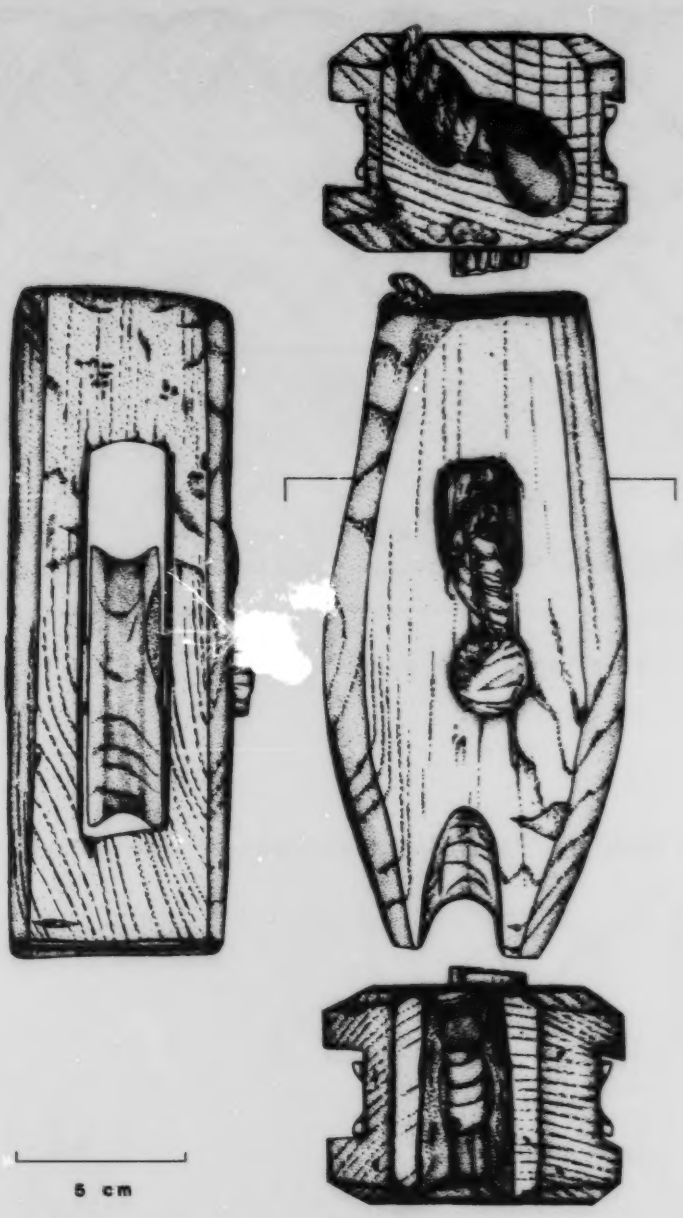

FIGURE 4
Single-sheaved block with double strop holes

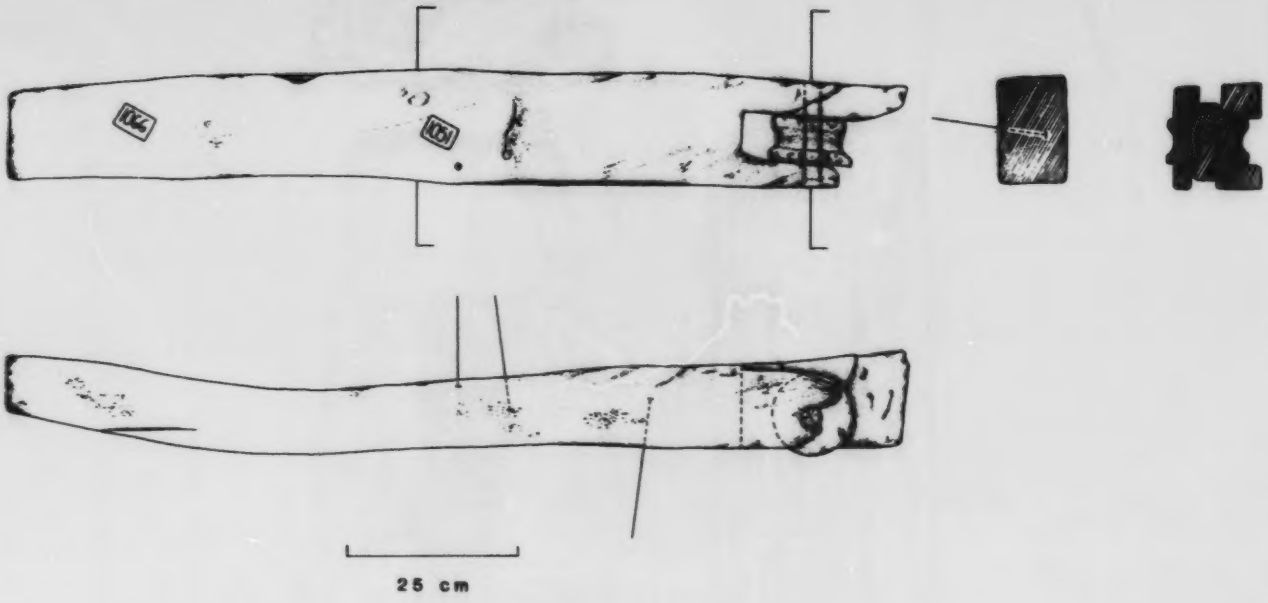

FIGURE 5. Possible knightshead or kevel block

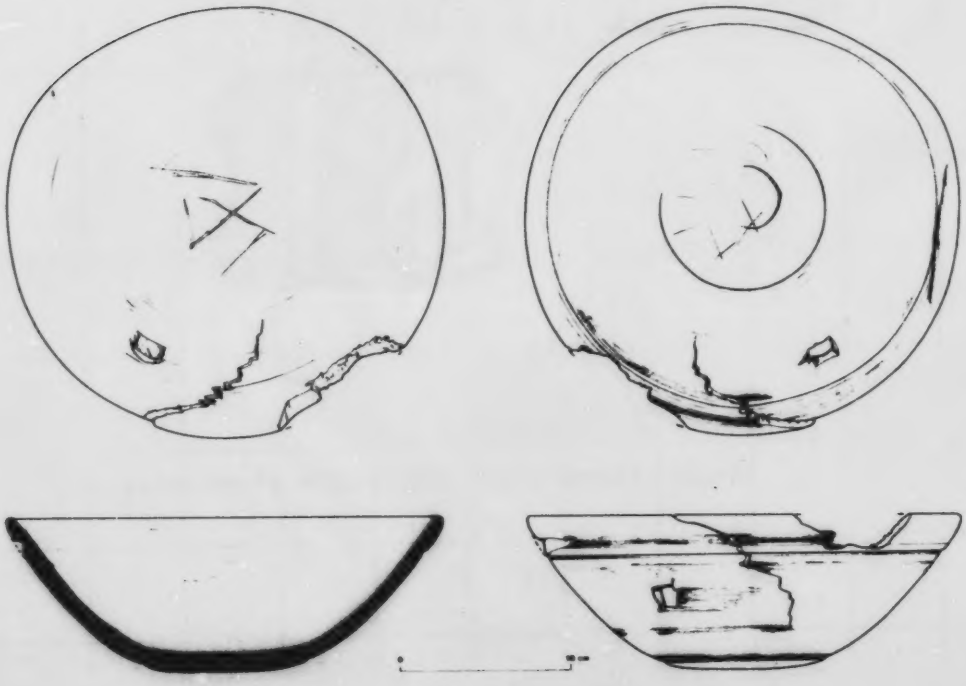

FIGURE 6. A turned wooden bowl

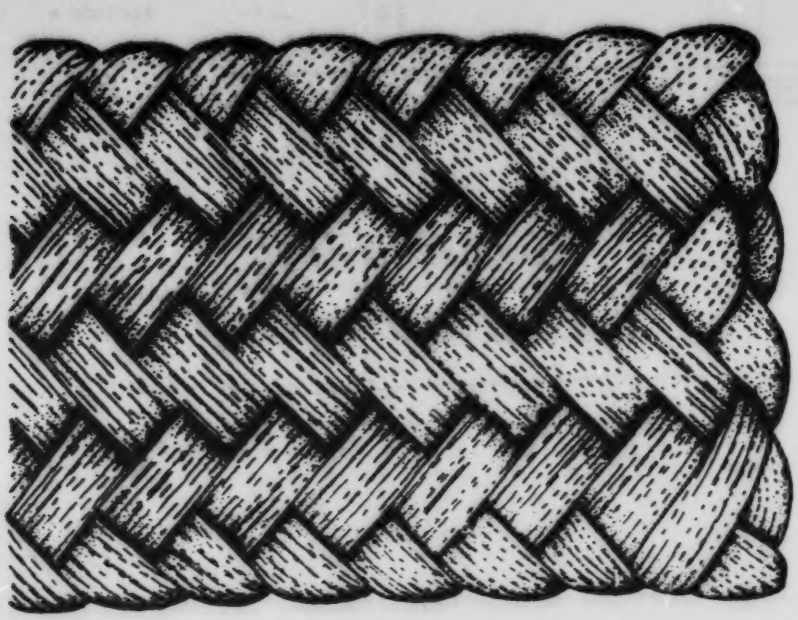

FIGURE 7. Detail of weave from organic mat

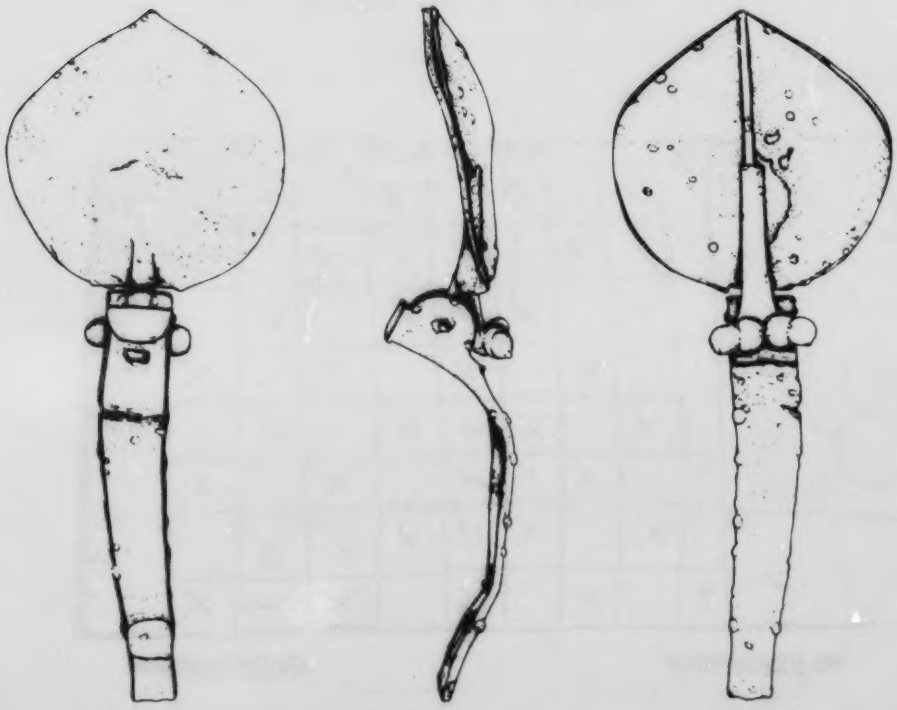

FIGURE 8. Handle and lid assembly from a pewter tankard

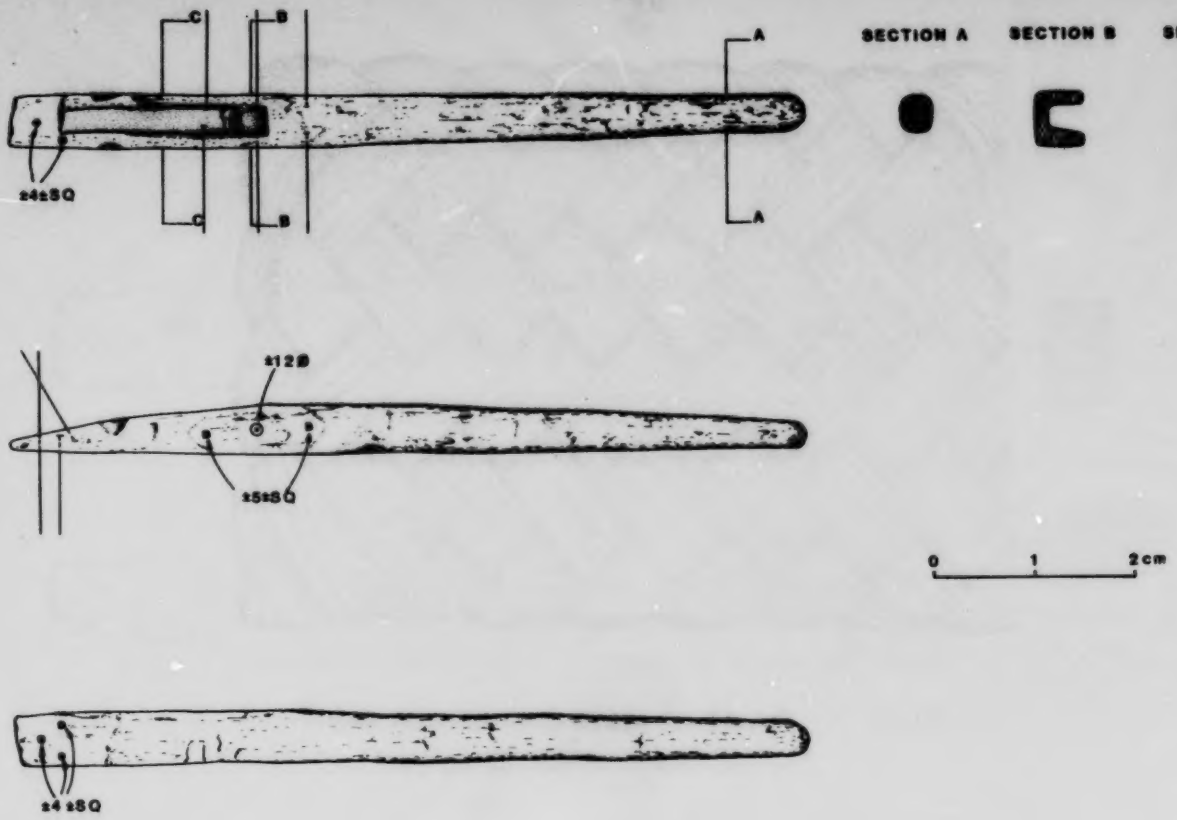

FIGURE 9. A cask hooping tool

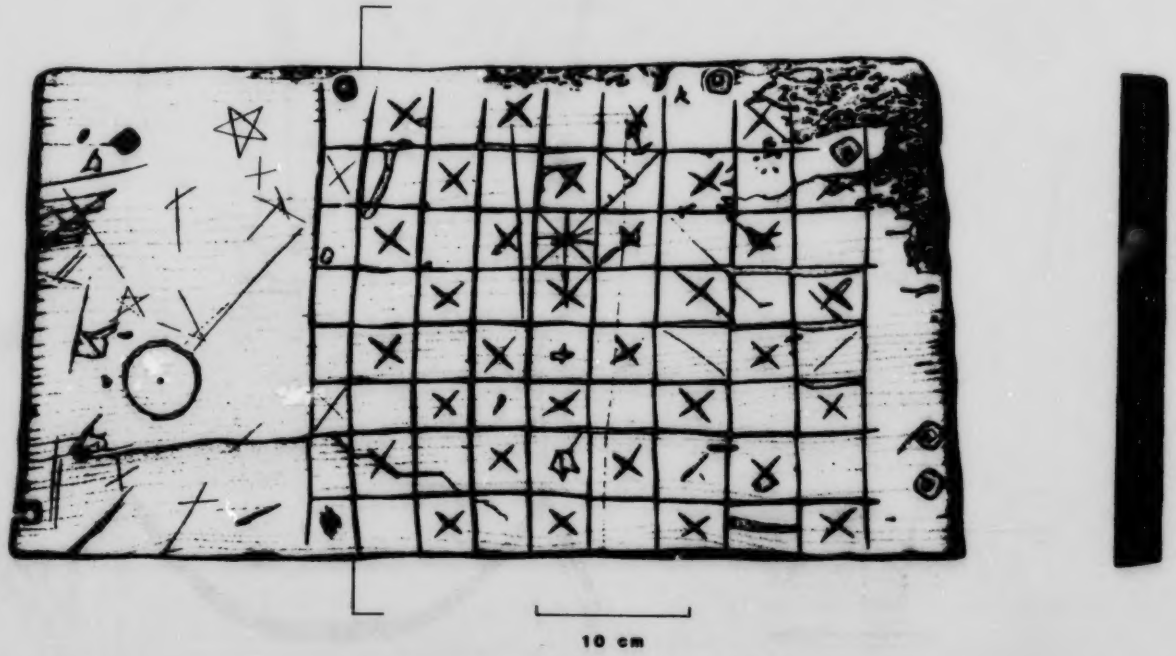

FIGURE 10. A game board, possibly for chess

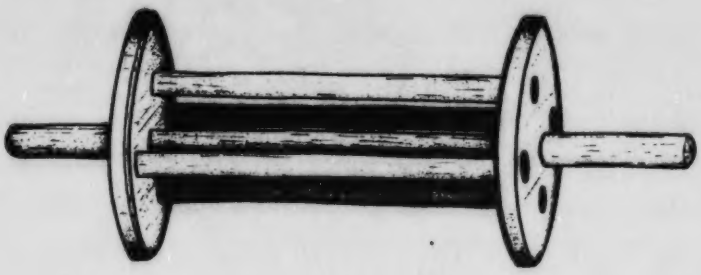

FIGURE 11. Reconstruction of a log reel

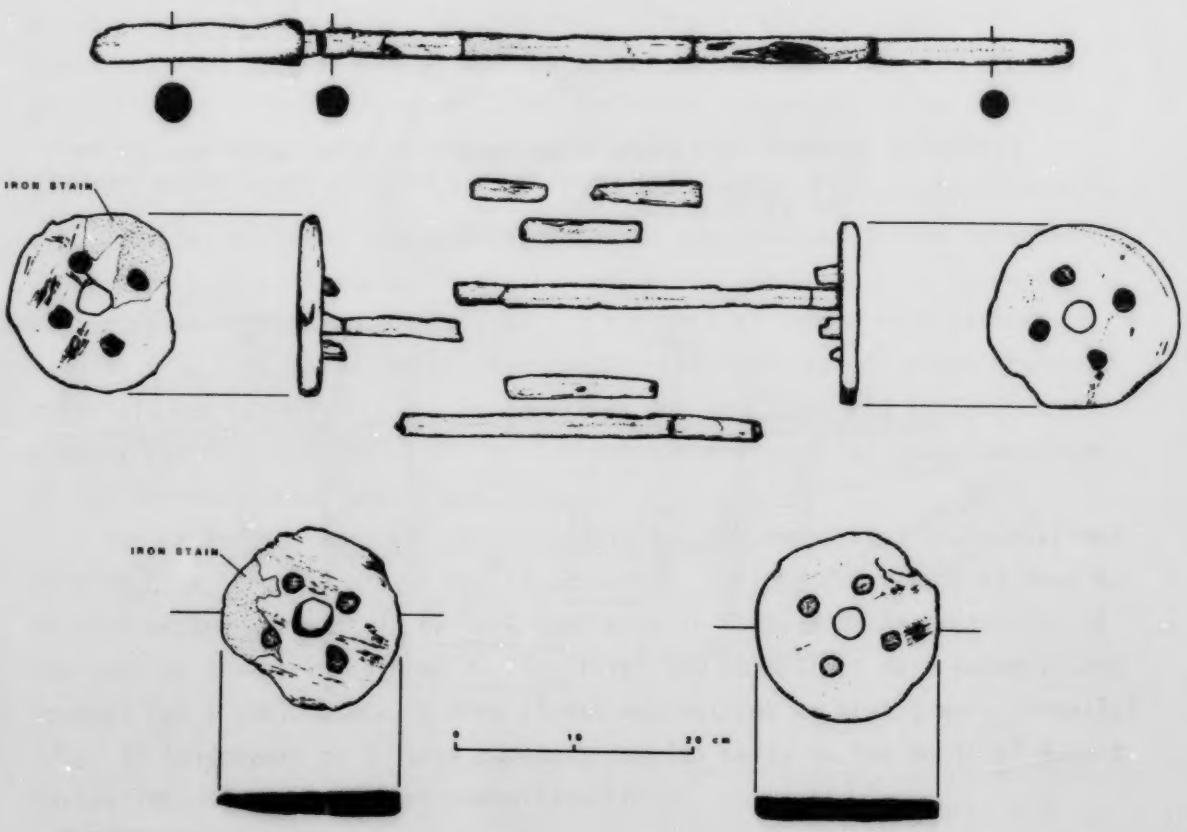

FIGURE 12. Recovered parts of log reel

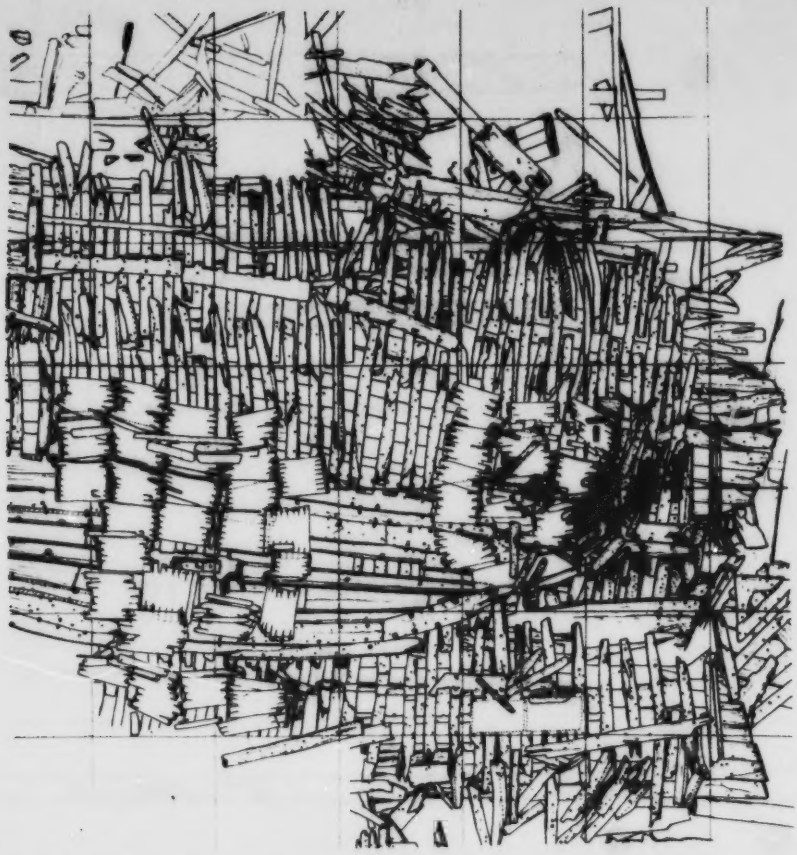

FIGURE 13. Ground tier casks from the mid-section and stern of the San Juan. Also shown is the billet concentration behind the stern casks.

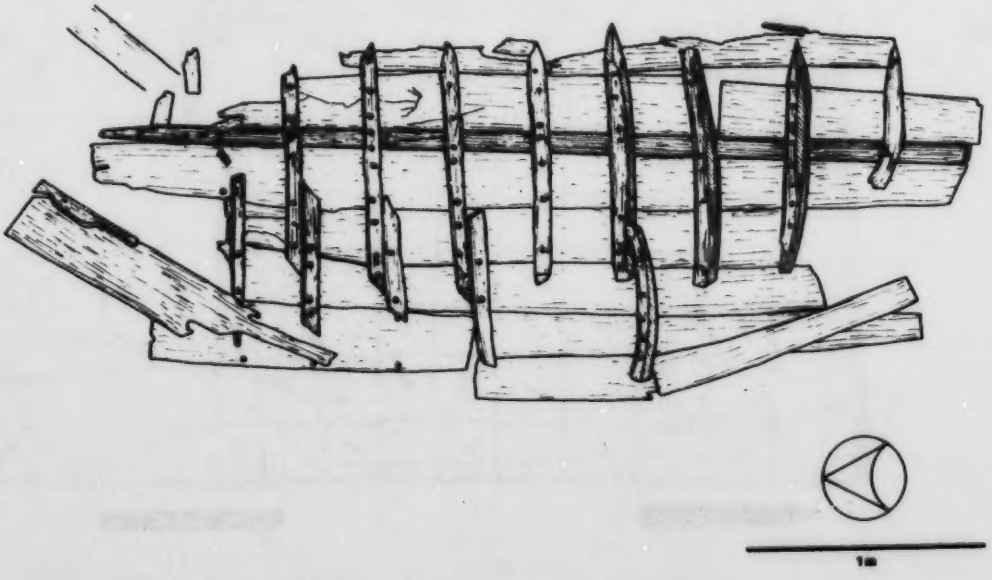

FIGURE 14. Remains of the small boat

EXCAVATIONS AT RED BAY, LABRADOR - 1982

James A. Tuck
Memorial University of Newfoundland, Archaeology Unit

The 1982 season at Red Bay, Labrador was by far the most productive and exciting summer we have enjoyed since the inception of the project in 1977. Excavations were funded by the Social Sciences and Humanities Research Council of Canada and the Historic Resources Division, Department of Culture, Recreation and Youth, Government of Newfoundland and Labrador. The latter institution also provided a permit (number 82-3) under which the researches were conducted. Owing to the unexpected richness of the finds an additional subsidy was sought and received from the Institute of Social and Economic Research, Memorial University of Newfoundland.

As in past years the Canadian Conservation Institute, National Museums of Canada, joined Memorial University as a partner in the Red Bay project although, once again owing to the nature of our discoveries, their role was greatly expanded during the 1982 season. Not only was a professional conservator at Red Bay throughout the summer to supervise the storage and stabilization of the more than 10,000 artifacts recovered, to radiograph all metal and many other objects, and to assist in removing friable artifacts from their burial context, but the Canadian Conservation Institute also provided equipment and expertise for an experimental ground penetrating radar survey of portions of Saddle Island, particularly an area where a number of skeletons was discovered. A substantial number of artifacts, ranging from iron tools, coins, and ceramics to textiles and other organic materials were removed to CCI headquarters for treatment and analysis. Without the co-operation of all of the above-named agencies the excavations at Red Bay would have been impossible.

The excavation strategy for 1982 involved the completion of excavations at Area E, a large cooperage/dwelling complex, further excavation at Area G, an oven or try-works south of that completed in 1981, and the excavation of two smaller try-works at Area J. The first two objectives were accomplished (except for a small block in Area E) but excavations at Area J were curtailed after the discovery of a large cemetery complex early in the month of August. Excavations at each area are summarized below.

Area E. Work at this large (400+m^2) cooperage/dwelling complex commenced in 1980 and continued through 1981 and 1982. The area is situated on a large fairly level terrace overlooking several try-works near the beach below. The occupation is distinguished by a layer of broken roof tile, so thick in places that some 1 m squares required more than a dozen mappings to record the positions of the tile fragments. In terms of location, the nature of the deposit, and the kinds of artifacts recovered, Area E resembles strongly a previously excavated cooperage/dwelling known as Area A (Tuck 1981; 1982). During 1980 and 1981, when excavations were centered on the surface of the terrace a large number of 19th century artifacts was found overlying the tile layer, beneath which were 16th century artifacts related to domestic and coopering activities.

During the 1982 season excavations were expanded to the margins of the area where tile-roofed structures stood, particularly to the hillsides which proved to be the repository for thousands of 16th century artifacts and considerably less recent European material. Domestic material and personal possessions included a wide variety of ceramics, including a number of restorable storage jars, pitchers, cooking pots, and shallow bowls or plates. Most have strap handles typical of Spanish ceramics of the period and the red to buff coarse earthenware fabric is frequently covered with a brown to green lead glaze. Tin glazed earthenware, or majolica, was much less common although fragments of several small vase-like containers, pitchers, and porringers were recovered. Glassware consisted of fragments of stemware and footed tumblers, mostly of remarkably thin glass, and fragments of a few small bottles. Although most of the glass is in reasonably good condition many specimens are undergoing a deterioration process known as "crizzling" and are extremely friable. A large silver coin about 3 cm in diameter was also recovered and has been identified as a French half ecu struck during the reign of Henry IV of France and Navarre who ruled between 1589 and 1610. This coin provides evidence that Red Bay continued to be used as a whaling port even after the defeat of the Armada in 1588 after which Spain declined rapidly as a world power. A second possible coin, broken in two pieces and extremely worn, remains to be identified. Rosary beads of bone or ivory, a buckle, what appears to be the hammer from an arquebus, knives, a fragmentary sword blade (?), and other similar objects were all personal possessions of the men who dwelt and worked in the structure(s) at Area G.

The tools and organic refuse from the coopering process which were discovered in 1981 (see Tuck 1982) left little doubt that this area was the location of a cooperage where staved containers were assembled and repaired. Additional discoveries made during the 1982 field season have rounded out the collection of coopers' tools (Plates 1 and 2) which now includes adzes, a chisel, a drawknife, a cooper's pincers, a scribing tool with baleen handle, numerous head vises or cask hooks, probably as many as twenty gimlets or small augers, and others which we have not yet been able to identify. Because of a conservation backlog, areas with organic preservation were avoided during 1982 but excavations in the coming seasons are expected to produce additional wood refuse from the coopering operation.

Although about 400 m^2 have been excavated to date no firm evidence of the styles, or even the number of structures at Area E has yet been recovered. Aside from the thousands of roof tile fragments and hundreds (perhaps thousands) of nails relatively little structural information has been forthcoming. Two rows of inverted tiles, each about 2 m long suggest drains and the distributions of tiles and nails may provide some information,but we remain unable to provide any type of reconstructions of the buildings themselves. A small remaining block on the surface of the terrace and the adjacent hillside will be excavated in future seasons but it is doubtful whether this area will produce any structural data.

Area G. This area was first opened during August 1981 when an area about 4 by 10 m directly behind a low stone wall was exposed to reveal a thin tile layer thought to represent the roof of an oven or try-works. During July 1982 this excavation was expanded in all directions and revealed a remarkably well-preserved try-works consisting of a large oven complex containing six intact fireboxes (Plate 3) and a seventh which had been partly dismantled during the Basque period. (For a description of the workings of a try-works see Tuck and Grenier, 1981.)

Structural evidence, in addition to the roof fall, consisted of a series of post molds, some still containing preserved wood, which appeared to encompass the oven structure and probably provided support for the heavy tile roof which sheltered the cauldrons and the men who tended them from the elements.

During the excavation of this structure several thousand artifacts were recovered dating from the 16th and 19th centuries. The latter include glass, ceramics, copper and iron nails, stove and lamp parts, and such unusual items as a gold embroidered hat band from the H.M.S. Emerald. Sixteenth century material

includes a large iron harpoon, several fragments of the copper cauldrons used to render the whale blubber into oil (some with burned fat still adhering to them), ceramics, glassware, nails, and a copper coin about the size of a half-dollar which has not yet been identified.

In late July excavations at Area G were expanded to the west, inland from the oven, where a large, thick (up to 40 cm) deposit of wood charcoal resting on sterile beach gravels suggested an activity area not before recorded at Red Bay. Adjacent to this a three-sided rectangular foundation of large rocks was partly visible through the surface vegetation. Both the charcoal layer and the structure were partially exposed during the remainder of the 1982 season.

The charcoal layer covers more than 10 m^2 but has not yet been fully exposed. On its surface and extending into the charcoal were found two roughly circular features made from small boulders and measuring 2 to 3 m in diameter. The rocks seem to have been mortared or covered with the same silty grey clay which was used to mortar the stones comprising the fire-boxes in the try-works. Although we suspected that they might represent forges, which must have been necessary for the repair of whaling gear, ships fittings, etc., no firm evidence to support this hypothesis has been found. Also, the two features contain, at least in their upper layers, 19th century as well as earlier artifacts. The grey clay, however, was clearly brought from Spain and if these two rock features prove to be of more recent origin we may have an interesting case of three hundred year old building materials being used for some purpose in the late 19th century.

The adjacent structure also presents problems in both function and dating. Although many of the rocks which comprise the foundation rest on sterile beach gravels, others are somewhat higher in the deposit, suggesting a more recent age. Wooden posts, apparently associated with the foundation contain 19th century nails and numerous late 19th and early 20th century artifacts were recovered from the sections which have been opened to date. Nevertheless there is a 16th century Basque occupation within and around the structure for ceramics, tile fragments, nails, and other early materials have been recovered.

Unfortunately, time did not permit excavations to proceed far enough to solve the problems associated with this structure but excavations planned for 1983 may clarify the situation. As it stands now we are holding open both the possibilities of a 16th or 19th century origin as well as some intermediate occupation of which we have no evidence as yet.

Area J. This area contains surface evidence of a small oven perched on a large bedrock outcrop a few metres from the water's edge and an even smaller oven situated in a natural bedrock outcrop which was apparently utilized to form two walls of the oven. The sod was removed from both areas during July in preparation for excavation during the month of August. However, our priorities changed early in that month because of the discovery of human skeletons at Area L and it was decided to postpone the excavation of Area J until 1983.

Work did not end at this time, however, for on the last days of the field season a ground penetrating radar scan of Area J was undertaken by staff of the Canadian Conservation Institute and a commercial firm, A-Cubed, of Toronto. Results of this survey are not yet available but the preliminary data indicate a number of anomalies and the technique did detect a layer of oven clay buried under 20 to 30 cm of beach gravel. The 1983 excavations at Area J, therefore, will have as their goal not only the recovery of information pertaining to the 16th century occupation of Saddle Island but also an evaluation of the ground penetrating radar technique for detecting subsurface features.

Area K. Although only test excavations were undertaken at this area in 1982 it promises to add a significant piece to our understanding of activities on Saddle Island during the latter half of the 16th century. The area is centered around a bedrock promentory, estimated at about 10 m above sea level at its highest point, and located on the southeasternmost point of Saddle Island. A small but lush growth of grass among the rocks at the hilltop first suggested that some cultural activities might have been responsible for the soil enrichment which permitted the grass to flourish. Test pits in this area revealed bits of charcoal and occasional small rocks indicating some use by human groups but gave no indication as to who they might have been or when they visited this part of the island. Test pits dug on all sides of the hill at the base of the steep outcrop, however, were much more productive. Wood charcoal, burned bone, and rocks were found everywhere at the base of the hill and a few nails and small sherds of coarse earthenware suggested that it was 16th century Basques who had utilized the hilltop. Several water-saturated areas produced great numbers of baleen plates as well as wood chips, fragments, and one split barrel hoop identical to those found in other 16th century waterlogged deposits.

Since none of the places where this material was found seems suitable for habitation or any other utilization it seems likely that the debris at the

foot of the hill represents some structure which formerly stood on the hilltop and gradually collapsed in all directions leaving only the meagre traces recovered in our test pits. The best interpretation of this structure seems to be that it was a lookout for whales and/or perhaps served as a beacon to guide approaching boats to the harbour at Red Bay. Such structures, known as atalayas date, in Spain, from the middle ages and served both as lookouts and navigation beacons. The surviving examples, however, are made from stone which the structure at Area H clearly was not. The nails found below the hill suggest a wooden structure although the large amounts of baleen may also have figured in its construction.

The hilltop affords a 180° view of the Strait of Belle Isle and the elevation is such that it seems doubtful whether there was much advantage to be gained in using some of the higher hilltops as lookouts for whales. This would be particularly true on the not uncommon days when haze or fog obscures much of the Strait of Belle Isle. The use of this area as a beacon is even more difficult to demonstrate although it is well located to guide the passage of small boats between Twin Island and the mainland and the rutter, or sailing directions, of Martin de Hoyarsabal in 1579, suggest that even larger vessels travelling west from the present-day Chateau Bay to Red Bay stay close to the land to avoid a dangerous shoal at the southeastern end of Saddle Island. Again, most of this remains in the realm of speculation but the 1983 field season may provide additional information.

Area L. It was at this area, which lies immediately west of, and is overlooked by, the probable lookout at Area K, where the most exciting discoveries of the 1982 field season were made. The area was initially tested as part of an attempt to determine whether dwellings other than the large tile-roofed cooperage/dwellings might have existed on Saddle Island. This endeavour seems to have been successful for two refuse deposits were located which we believe mark the locations of temporary dwellings. The first is in a small rectangular 'room' in the bedrock not far from the base of the hill where the lookout is located (although far enough removed so that the refuse could not have been derived from that structure). A single test pit revealed a deposit of rich black soil containing charcoal, burned bone, and a few small fragments of coarse earthenware. The second area, which was more extensively excavated, is located about 20 m west of the first. A one metre wide north-south trench excavated in this area produced considerable burned refuse bone and numerous large fragments of burned whale bone which must have been used as fuel.

Associated with this debris were sherds of several coarse earthenware vessels identical to those from elsewhere on Saddle Island, iron nails and rivets which can also be duplicated many times over, and several pieces of cut baleen, some of which seem to be 'blanks' for baleen knife handles such as have also been found elsewhere in good 16th century context. These 'blanks' as well as the baleen handles of several knives and the scribing tool from Area E were probably the first Red Bay souvenirs and may constitute an early example of the whaleman's art of scrimshawing which reached its peak in the 18th and 19th centuries.

In no case were roof tiles represented by more than a few fragments so we can be certain that whatever structures are represented by the nails and other refuse were considerably more humble than those in which the coopers dwelt and worked. In hope of discovering post molds or other information pertaining to the suspected structures it was decided to dig an east-west trench. To determine whether to dig first toward the east or west a few sods were turned over and replaced in each direction. As the sod from the last test pit to the east was turned over a somewhat eroded but clearly recognizable human skull appeared in the bottom of the sod which had been removed.

As the area surrounding the skull was cleared of the overlying root mass and excavations expanded in all directions other skull fragments and bits of eroded human bone appeared immediately beneath the sod. Whale bones, almost entirely ribs and vertebrae, were also exposed and may be partly responsible for the creation of a burial environment somewhat less acidic than that at other areas of Saddle Island. As more human bones were discovered several things became apparent. The first was that many of the skeletons were surrounded by masses of textile apparently of 2 or 3 different weaves which, coupled with the thick mass of fine roots, complicated the excavation problem considerably. Because of the extent of the human remains it was decided to isolate the block which contained them. This was done by digging a one metre trench surrounding an area of three by four metres. In this trench were found what appear to be the fragmentary long bones of two individuals, as well as considerable whale bone. These were mapped, photographed, and removed and a low wooden enclosure was built around the remaining skeletons. Two movable working platforms were then constructed from which we could excavate the skeletons without damaging other unexcavated remains. Finally a large wall tent was erected over the area to allow excavations to proceed regardless of the weather (Plate 4).

At the close of excavations eight skeletons had been partially or completely exposed. They lay parallel to one another in 2 north-south rows with the heads to either the east or west. Most appear to be resting on their backs in an extended position and, with a few exceptions, are reasonably well articulated (Plate 5).

A second fact which became apparent as individual skeletons were isolated was the bodies had not been deliberately buried but rather had simply been abandoned immediately on top of the 16th century midden which first called our attention to Area L. The textile which both over and underlies the bones prevented the complete exposure of most skeletons but aided, to a certain degree, in the removal of the single individual which was not left in place until 1983. After the mass of textile had been isolated from that surrounding it, the Canadian Conservation Institute staff and Dr. F.J. Melbye, physical anthropologist from the University of Toronto, were able to separate the textile from the underlying soil by carefully working their hands between the two. The entire block was then transferred to our field laboratory on a sheet of plywood where the block was radiographed and a preliminary cleaning using running water and a water-pik was undertaken (Plate 6). A small iron eyelet revealed by the radiograph was removed and two distinct weaves could be observed in the textile suggesting that the cloth may pertain to garments rather than a burial shroud.

While these excavations were taking place further test pitting revealed a number of deliberate burials. Two of these were opened, one of which was excavated completely and the other partly exposed and re-covered to await the 1983 season. The first contained two extended skeletons, both heading west, which were covered by less than 20 cm of grave fill. Both skeletons were fairly well preserved from the feet to about the pelvis with nothing remaining above that point except the teeth of one individual. The upper central incisors display no shovelling, hence the skeletons appear to be those of Europeans. The intact portions were block lifted using auto body filler rather than the standard plaster of Paris. This technique worked exceptionally well as the auto body filler sets rapidly, is very strong, and much lighter than plaster.

The second grave explored in 1982 consisted of a large oval pit about 2 m in diameter. It was visible prior to excavation as a depression in the ground. When the surface was exposed the profile in the overlying peat showed clearly where beach gravel had been thrown out of the grave fossa and

not entirely replaced. At the close of excavations portions of four skeletons had been exposed, all in semi-flexed positions and not all oriented with heads to the west as was the case in the other burial. As only a portion of the grave was exposed we suspect that further excavations will reveal additional skeletons. The bone in this grave is extremely soft and is almost exactly the same colour and consistency as the grave fill. Only very meticulous excavation allows the two to be separated.

Any final interpretation of this burial complex and the skeletons abandoned on the ground must await further excavations but a few cautious comments might be offered at this point. The double extended burial in a typical European fashion and the discovery of four more burials in five small test pits suggests that we may have stumbled on a major cemetery. A ground penetrating radar scan of the area also suggests anomalies which might prove to be the locations of other graves. Excavation in 1983 will expose a larger area where more graves are known to exist.

The second burial, that containing at least four individuals, presents a somewhat more difficult problem in interpretation; the unburied skeletons even more so. Both clearly indicate tragedies involving the deaths of a number of people at about the same time. One possible explanation may be that these skeletons are related to the several accidental overwinterings which occurred during the late 16th century (Selma Barkham, pers. comm.). Caught by sudden freeze-up the whaling ships and their crews were forced to spend several winters in southern Labrador and deaths were common during these times. The mass burial may, therefore, represent the remains of men who died during the harsh winter but could not be buried until the ground thawed the following spring. The unburied bodies may tell of a similar overwintering disaster but it is more than curious that the ten individuals were not accorded a proper burial but were simply abandoned to the elements.

There are other possibilities to be considered as well but further speculation is probably unwise until complete excavation and further analysis of the human skeletons, textiles, and other material is completed.

It should be obvious from this brief description that the 1982 season at Red Bay was the most productive we have enjoyed in the past five years. The extremely well-preserved oven, the tools and other artifacts from a cooperage, the probable lookout and small living sites all answer questions we have asked ourselves since the project began in 1977. However, while the 1982 season seems to have answered a number of questions it has also posed even more new

problems. The rock and clay features, large charcoal deposit, and rectangular stone structure at Area G remain unexplained while the burials and abandoned bodies at the southern end of Saddle Island bring a whole new dimension to our study of 16th century whaling in southern Labrador. Only additional excavation and analysis hold any hope of answering these questions although, indeed, the events to which they bear mute witness may lie beyond our ability to understand.

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PLATE 1

Coopers' tools from Area E, Saddle Island, Red Bay Labrador: a) cooper's pincers; b) iron scribing tool weighted with lead and having a baleen handle; c) blade from a tool for cutting croze grooves into which head pieces of staved containers were fitted; d) head vise or cask hook used to lift the last head piece of a barrel into place before the staves were drawn together; e) gimlet or auger used to bore the hole for the threaded head vise and probably to pre-drill nail holes as well; f) the iron end of a "peavy-like" device used to force hoops over an assembled barrel.

All specimens are pictured prior to cleaning and stabilization.

Photo courtesy of the Canadian Conservation Institute.

AMS PROJECT 1824

PLATE 2

Coopers' tools from Area E, Saddle Island, Red Bay, Labrador: a) drawknife blade; b) coopers' adz; c) woodworking chisel.

All specimens are pictured prior to cleaning and stabilization.

Photo courtesy of the Canadian Conservation Institute.

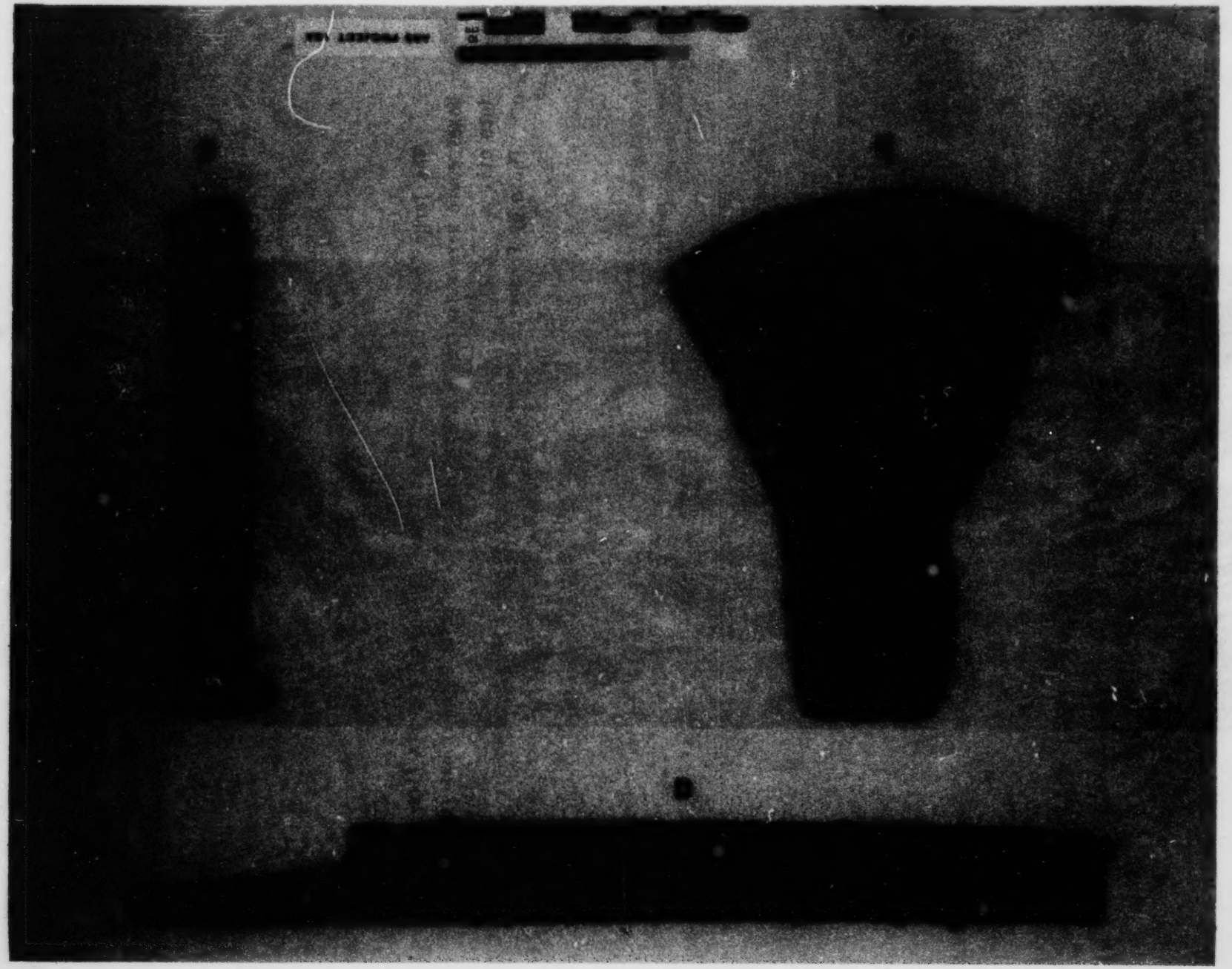

PLATE 3

The large "oven" or try-works at Area G. Each of the six fire-boxes would have supported a copper cauldron in which blubber was rendered into oil.

Photo by Frederick Schwarz.

PLATE 4

Wood platforms placed on a frame over the unburied skeletons at Area L to allow excavation to proceed without damaging the human bones and surrounding textiles.

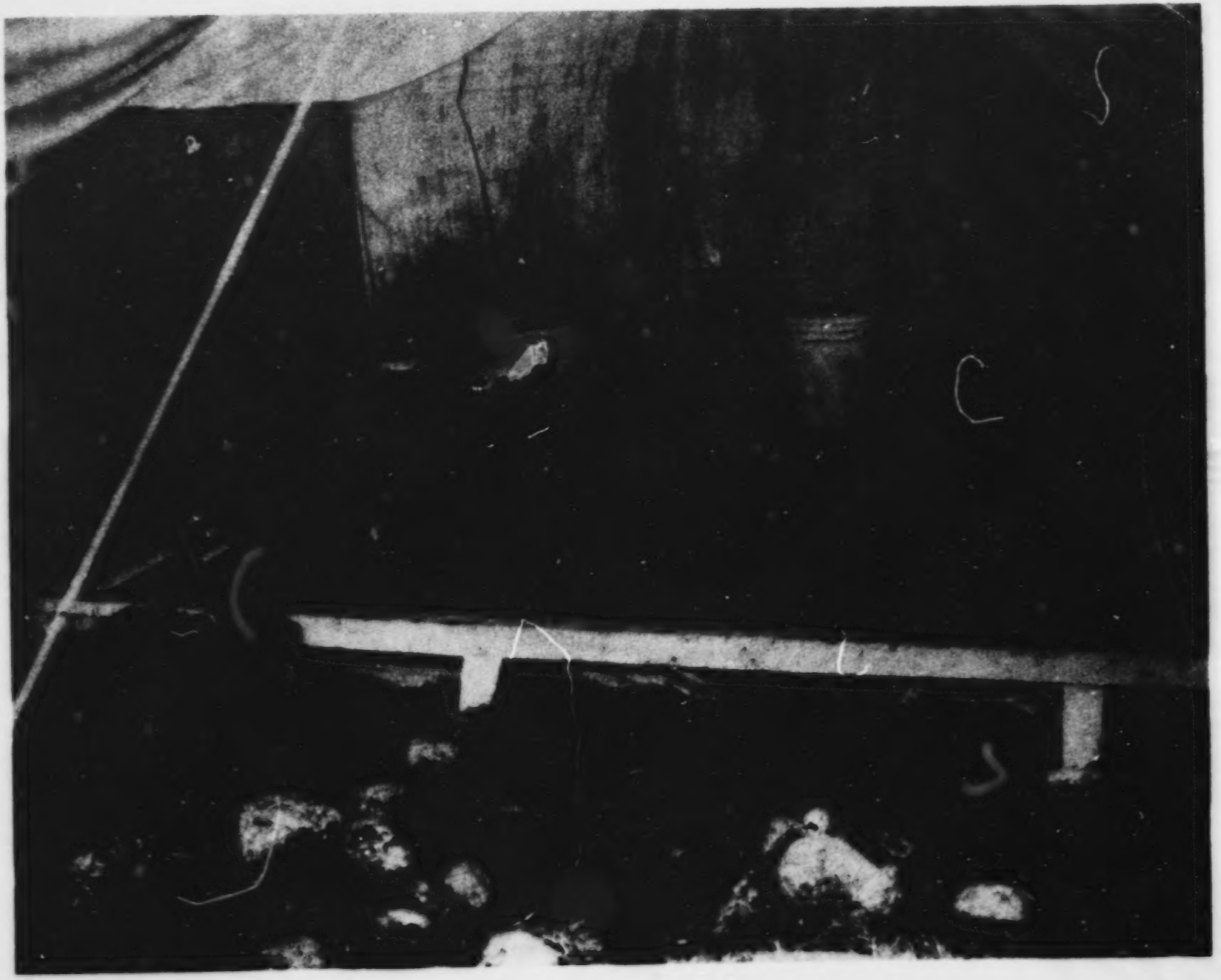

PLATE 5

Partially exposed skeletons at Area L. Near the center of the photograph can be seen three human skulls from which infracranial skeletons radiate to the left and right. Textiles which surround the skeletons are practically indistinguishable from the surrounding root and soil matrix.

Photo courtesy of the Canadian Conservation Institute.

PLATE 6

Separating human bone and textile from the root and soil matrix with a "water-pik". A mass of textile is visible at the far right and a fold can be seen along the edge nearest the workers.

ARCHAEOLOGICAL SURVEYS IN THE STRAIT OF BELLE ISLE

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Beginning with T.G.B. Lloyd's (1874) report on the archaeology and ethnology of southern Labrador and the inception of professional archaeology by Kidder in 1910 (Kidder 1927) and Jenness (1929), northwestern Newfoundland and the Strait of Belle Isle region has attracted the attention of a succession of enthusiasts seeking clues about its past. There are good reasons why this area has been chosen for study. Perhaps most important is its geographical position with respect to arctic, subarctic, and temperate environments in the greater Northeast, and its proximity to the mainland of Labrador-Quebec and Nova Scotia. In addition, northern Newfoundland is enriched by the mingling of cold Labrador Current waters with the warmer waters of the Gulf and the Atlantic. Newfoundland's cod and whale fisheries stimulated European settlement at an early period, and its marine resources are legion. Equally important, the convergence of several terrestrial ecological zones results in a variety of land and freshwater resources. Furthermore, the area has been accessible to peoples approaching from different directions - north, south, and west - and its habitats accommodate a variety of different cultural adaptations.

Evidence of a rich and varied settlement history is seen in the types of archaeological remains found in the Strait of Belle Isle region. Immediately following the retreat of glacial ice about 10,000 years ago, this area was probably colonized by late Palaeo-Indian cultures whose descendants became the Maritime Archaic people who lived here and in Labrador until about 3000 years ago, when Eskimo cultures appeared. Thereafter a variety of Eskimo and Indian groups occupied the region, in later periods concurrently with Norse, Irish (?), Basque, Dutch, French, and English. Traces of nearly every prehistoric cultural manifestation known from the far Northeast have been found (Wintemberg 1939, 1940; Harp 1951, 1963, 1964; Martijn 1974; McGhee and Tuck 1975; Levesque 1976; Renouf 1977). Apart from survey data however, the bulk of our recent information comes from the Maritime Archaic (8000-3000 B.P.), Dorset (2000-1400 B.P.), Norse (1000 B.P.), and Basque (A.D. 1525-1600) periods. Little is known about other residents and visitors, especially about the Indian cultures following 3000 B.P. In addition, little is known about the geographic boundaries and the kinds of inter-relationships between Indian, Eskimo, and

European groups. Equally unknown is the archaeology of the dominant European patrimony of the region despite the fact that the record of European settlement is one of the longest and most complex of any region in North America.

The purpose of the survey was primarily to search for remains of Labrador Inuit who are known historically to have utilized and settled periodically in the Straits and to have had contacts with Europeans and Indians there from the late 16th to the early 19th centuries. To date, no archaeological evidence of these activities has been found. Recent controversy over the ethnic identity of these groups points to the need for archaeological work. Since Labrador Eskimo settlement locations and dwelling forms are typologically different from Indian settlements, and are frequently visible in exposed locations, it should be possible to identify and date Inuit sites, if they exist here, by comparison with Labrador sites. A secondary goal of the work was to gather data on other cultural periods and on geological distributions of chert, soapstone, and nephrite.

SURVEY DESCRIPTION

The survey was conducted by boat during a fourteen day period between 27 July and 9 August, 1982. No attempt was made to undertake detailed investigations in any area or to sample all of the resource zones in a given region. However, certain key areas were chosen for concentration. Within these, areas likely to have been chosen by Inuit - especially exposed headlands - and other places where signs of settlements would be visible were inspected. Weather and time were significant constraints, and only a few of the targeted regions could be visited. More time was available for studies at the northern tip of the Great Northern Peninsula than elsewhere, but brief inspections were also made in the Port au Choix area and on the Quebec coast between Blanc Sablon and Old Fort. Standard survey techniques were used. All sites, whether prehistoric or historic, were noted and photographed. Samples of artifacts and debitage were collected, as were charcoal and faunal samples when possible. Structures were sketched or photographed. If *in situ*, they were sampled with 50 cm^2 test pits. In addition information was gathered from local residents on site locations, on available animal resources, and on ecological and geographical conditions.

As our survey commenced and ended in Port Saunders, several days were spent visiting sites in this region. Historically, this area has been perhaps the most heavily occupied part of western Newfoundland. The Point Riche environs include a variety of resource zones ranging from island and marine areas to

channels, bays, river and forest habitats, all of which are productive today and can be expected to have been so in the past. With its many protected harbours, Point Riche Peninsula offered an excellent central base. Published surveys here have been limited to those of Wintemberg and Harp. To date no attempt has been made to gather new survey information from this area with an eye towards studies of culture change and settlement and adaptation shifts through time, a study for which the archaeological resources of the area are well suited.

Our surveys were confined to the entrance of Port Saunders and Hawkes Bay, Keppel Island, Point Riche, Gargamelle, Back Arm, Port au Choix Harbour, and St. John's Island.

Keppel Island Keppel Island has been reported by both Wintemberg and Harp, and was visited by the author in 1980, at which time a pit structure resembling a Neo-Eskimo winter house was noted in the shingle beach near the high tide line north of the lighthouse landing. This summer the Keeper mentioned that a bulldozer was responsible for the suspicious pit. However, we did not elicit new information on the adjacent Inuit-style tent ring a few metres to the north which deserves further investigation.

Our attention was directed at Wintemberg's Keppel Island site on Morue Spit, also known as Codtail Point (Wintemberg 1939:86). Local lore holds that a former French fish and lobster station existed here, and this is attested to by several graves, house foundations, trenches used for hauling ships onto the beach, and other features. Although Wintemberg's nangissat (hopping stones) were not noticed, Dorset artifacts still can be found on the surface a few metres south of the larger "ship's trench". This area probably contains the remains of several disturbed Dorset structures. A walking survey around the island failed to produce evidence of other sites, although a stray biface fragment was found on the bluff west of the lighthouse.

The shingle beaches lining the northern approach to Port Saunders contained a variety of stone structures at various elevations above sea level, but most of these appear to be of recent origin.

Cape Riche A brief inspection of the north shore of Gargamelle Cove, including the rock shelters that once contained Dorset burials and tool deposits (Harp and Hughes 1968), produced little of archaeological interest. A poor quality chert outcrops in a number of locations, and several large quartz crystals found in the limestone bedrock suggest that local sources of crystal were used by resident Dorset people. Attempts to locate Maritime Archaic

structures on exposed gravel beaches were unsuccessful. Point Riche itself was not visited. However, on a narrow terrace at Black Point, overlooking Phillips Garden (Port au Choix 2), a small Dorset site was found beneath a thick cover of peat. Test pits recovered flakes of fine-grained tan and brown chert, charcoal, bone, and a few Dorset tools. Both lithics and tool types were reminiscent of Groswater Palaeo-Eskimo collections in Labrador.

While in Port au Choix we learned of small caves and rock shelters along both shores of Back Arm. Reputedly, artifacts have been found in some of these shelters. In addition a local resident showed us a patinated carving of a swimming duck with an out stretched neck, carved from a sturgeon plate. This piece was said to have come from a site near the entrance of Back Arm. Although we bushwhacked both sides of the arm and walked the shore north to Barbace Point, finding shelters and rock structures, we did not locate Dorset or Maritime Archaic sites or burials.

One of the more interesting and little-known aspects of Port au Choix history relates to its several centuries of French occupation. The French, who fished this area on a seasonal basis for several centuries, established shore stations here and in adjacent regions. Many of these sites have not been inhabited in recent years and would be excellent targets for archaeological investigation. One such site at Barbace Cove extends over a large grassy meadow. Test pits revealed abundent 18-19th century artifacts, animal bones, shells, and other settlement remains.

St. John Island Crossing to St. John Island, we found another large historic site on the inner end of the harbour west of "The Haven". Toward the southwestern edge of the meadow two 4 x 5 m sod-walled pit houses with entranceways in their southern walls were found. These structures contained artifacts and faunal remains similar to those from Barbace Cove. They suggest the types of small dwellings that might be expected of French fishermen who had jumped ship to try their luck at wintering over.

A considerable part of the western and southern shore of St. John Island was also inspected. Other than a few boulder caches near Photograph Point, one of which was excavated because its surface indications resembled Maritime Archaic burials in Labrador, nothing was found to justify the expectation that west coast islands have been inhabited by Maritime Archaic, Dorset and other prehistoric maritime-oriented groups. The lack of sites was surprising given the importance of similar locations to coastal peoples in Labrador.

Dog Peninsula A few hours were spent searching for sites on the outer end of Dog Peninsula, a small point three miles northeast of New Ferolle. The sites found here were all small, specialized camps.

Dog Peninsula 1 is located on a small cobblestone cove on the east side of the peninsula. The cove contains a series of exposed shingle and cobblestone beaches backed by shrub and spruce. The beaches themselves are free of vegetation. Those closest to the present shore are composed of large rounded cobbles, while above this level they are composed of more angular slabs which indicate a change in beach-building and erosional processes. To the uninformed eye it appears that the land is sinking relative to the sea and that new beaches with rounded cobbles are being thrown up over the older slab rock deposits.

Slanting down across the upper beachline and converging toward each other from opposite sides of the cove were two slightly excavated "roadways" whose cleared, flattened interior surfaces contrasted with the natural surface of the beach (Plate 1).

These channels were contained within low mounded walls created with the stones cleared from the 1.5-2.0 m wide interior. The longest of these features ran 90 m from the scrub to the boundary between the angular slab beaches and the rounded cobblestone deposits, where it appeared to have been truncated by processes depositing the lower cobblestone sections of the beach. The elevation of the "stone roadway" is about 8-12 m above present sea level. A similar roadway angles down across the northern part of the cove, becoming indistinct as it approaches the center of the beach. The alignments of the two roadways coverge, but do not join, nor do their angles suggest they are part of a single feature. Other disturbances were noted in the beaches, but none provided any suggestions as to the age or function of the roadways. Similar stone roads have been noted on the Aillik Peninsula on the central Labrador coast (Fitzhugh 1982).

The function and cultural affiliation of these structures is not known. However, they seem to have been constructed for hauling heavy objects, perhaps large animals (whales, walruses or boats to or from a shoreline that no longer exists. This interpretation is based on the preparation of a smooth surface, avoidance of the steepest gradients by angling the path across the beach ridges, and the placement of boundary stones to contain the movement in the prescribed channel. All of the surfaces within the roadways are as heavily encrusted with lichen as the undisturbed beach. This, and the facts that the upper parts of the

roadways disappear into the scrub, and that their lower ends have been truncated by more recent shorelines, suggest considerable antiquity for the constructions.

In addition to ancient roadways, two other sites were noted. On the northern tip of the peninsula were several caches - some opened and some still closed - consisting of cylindrical pits ringed with circles of flat capstones. On the southwest side of the peninsula we found an historic period camp with circular and rectangular foundations, barrel staves, and whalebones. The latter suggested that the site may have been used in the whale fishery.

Cape Norman to Cape Bauld North of St. Barbe the coast is low, straight, and relatively featureless until one reaches Cape Norman. Although a number of promising site locations were noted we were unable to go ashore. Cape Norman itself is a desolate and forbidding place - rocky, barren and windswept, with little vegetation; but to the east the rocky coast gives way to gentle coves and beaches, any one of which would have contained Labrador Eskimo tent rings had the location been in central Labrador. However, no trace of Inuit or of prehistoric occupation was noted. Surveys east of Pistolet Bay at Savage Cove and Onion Coves - the latter a large French shore station of the 19-20th centuries - were equally unproductive.

Crossing Pistolet Bay from Cape Norman en route to Sacred Bay and L'Anse aux Meadows, one is struck by a dramatic change in landscape and vegetation. Cape Norman's rocky bleakness is replaced by low, wooded bays, and lush, grass-carpeted headlands which resemble northern Scotland and Ireland more than they do the northwestern part of the Great Northern Peninsula or southern Labrador. Undoubtedly this must have been a factor in the selection of the L'Anse aux Meadows site by the Norse. The weather was foul during our stay here. The fishermen, however, were doing well with gill nets and cod traps, and sheep roamed the grassy fields, frequently finding themselves caught in nets which had been laid out to cure. Garden plots were thriving. One had the feeling that the Norse (Ingstad 1977) had picked a fine site and that many aspects of their life were being repeated in the activities of today's residents.

Quirpon Island A brief survey on the eastern shore of Great Sacred Island was of interest primarily because of the beached wreck of a large steamer; no archaeological sites were found. However, on the northeastern end of Quirpon Island, in a wild cove known as Degrat Harbour, we found two sites dating to the historic period. One of these, Degrat Island 1, is located on the northern side of Degrat Island in marshy ground beside a tidal cove. Two rectangular sod walled foundations each about 4 m wide and 8 m long were found.

House 1, the eastern structure, had been built with its northern and eastern walls backed by a large rock outcrop to give it added protection. Test pits inside this structure and in its entranceway and midden, produced iron spikes (some-reworked), clay pipes, glass, ceramics, iron sheeting, brick or tile, fish, bird, and mammal bones. No slag, coal or charcoal was recovered. The types of spikes, pipes, and annular ware suggest an 18th century date.

House 2 is located in boggy ground 25 m southwest of House 1. It is about the same size and shape but lacks an obvious entrance passage or doorway. This house had been test-pitted several years before our arrival. Stoneware, green glass, annular ware, white glazed ware with blue flower patterns, and clay pipe fragments were recovered. These finds were similar to those from House 1. Both houses appear to have been occupied at the same time, probably during the winter and probably for a number of years if one may judge by the number of artifacts, faunal remains, middens and sod construction.

Preliminary evaluation leads me to suggest that this site may have been inhabited by 18th century Inuit, and that it may be one of the few year-round residences of Inuit people in southern Labrador and Newfoundland. At present the most convincing data comes from the form and structure of the houses and the location of the site. Degrat Harbour is located in an extremely exposed spot only a mile or so from Cape Bauld, one of the sternest of North Atlantic capes. However, from here one has, during winter, direct access to the sina, or ice edge, where sea mammals and waterfowl congregate. And, while reminiscent of many Eskimo and Thule winter site locations in Labrador, Degrat Harbour lacks habitability as defined by the usual European standards in this part of the world, for it is cut off physically from traditional white settlement areas in Quirpon Harbour. In addition, the form of House 1 especially, with its entrance passage, corner entry, and midden, is in keeping with Labrador Eskimo houses, though both Degrat Island structures lack obvious sleeping platforms and traditional Eskimo types of artifacts. It is possible, however, that Inuit living in frequent contact with Europeans here might not use much traditional material culture.

To this suggestion might be added the further possibility that if the site is Labrador Eskimo, it may have been occupied by the enterprising people met by Sir George Banks (Lysaght 1971) in 1766 in the Quirpon region, and by Sir George Cartwright (1792) in 1770. These descriptions leave little doubt

about the identity of the people as Inuit. It remains for future work to resolve the question of the cultural affiliation of the Degrat Island structures.

A second site, Pigeon Cove 1, was located in the northwestern corner of the harbour, and contained a large quantity of 19th and 20th century materials. No evidence of a structure was found, and it appears that these remains came from a plank building that had been completely removed from the site. It is likely that the area was used as a summer fishing camp, because iron bolts were driven into the rocks for boat off-hauls. Today the harbour is fished by men from Quirpon Harbour, and no one stays behind to harken to the Furies' calls.

Nephrite has been reported to occur geologically in the Quirpon Harbour - Straitsview region (R. Stevens, pers. comm.). In addition soapstone is supposed to be found near the water's edge in Straitsview, according to a L'Anse aux Meadows resident who told us it had been used recently for carvings. Unfortunately we were not able to track down these leads.

Red Bay, Labrador Crossing the Straits, we spent two days at the Memorial University and Parks Canada excavations in Red Bay. During this time we visited Maritime Archaic and Dorset sites, and boulder structures from unknown peoples and times. Like other areas of this coast Red Bay appears to have a large number of sites. One site on the south side of Saddle Island exhibited tent rings similar to the "D-shaped" type used by 17-18th century Labrador Eskimos in northern Labrador.

QUEBEC SURVEYS

Four days were spent surveying three locations between Blanc Sablon and Old Fort. This coast is somewhat less well known archaeologically than the coast of southern Labrador. Instead of the latter's long straight shores, the Quebec coast is deeply indented and has many islands, resulting in different resource and settlement opportunities. In addition, surveys by Levesque, Martijn and others have indicated the presence of a greater variety of pre-historic cultures than has been found in the more exposed Labrador section of the straits.

Isle au Bois At the Labrador - Quebec border lies a large, low island called Isle au Bois, which is somewhat of a misnomer, because today the island does not support either trees or bushes. On its western shore lie the remains of the Courtemanche fortifications with its cobblestone pavements, extending hundreds of metres between low boulder walls, surrounded by scores of circular

pavements 3-4 m in diameter. A large semi-subterranean ammunition depot and several brick and stone building foundations also occur. The site covers several acres. The size and the amount of energy required to build and maintain this establishment is striking to one familiar with the small historical sites of Labrador. The northernmost fort in New France, this site impressively documents the importance of the northern fishery to the French in the early 18th century.

On the extreme southwestern tip of the island a small site was indicated by the presence of tent rings and boulder clusters, and by chert flakes in scattered blowouts. A test pit near one of the rock features produced charcoal, and grey speckled and tan cherts unlike those found in Labrador archaeological sites, iron nails, stoneware and fire-cracked rocks. No biface fragments were found, nor other traces that would definitely link this site with aboriginal cultural activity. It may be a locus of European activity.

Isle du Bassin Heavy winds prevented us from approaching the settlement of Brador. Our time was given to inspecting the northern end of Isle du Bassin and its harbour, Le Bassin, a locus of settlement activity in the historic period. At one site on the western side of Le Bassin, roof tiles and European flint were found on the beach. A test pit in the sod above the beach produced evidence of a thin stratified deposit with roof tiles in the lower levels, tiles and flint in the middle levels, and 19-20th century artifacts in the upper levels. Sand thrown up from the beach during storms has isolated levels in this deposit. Although probably disturbed in some areas and small, this site might provide evidence for a number of European occupations.

Middle Bay Mi dle Bay has a protected harbour and is known to have been used by Basque whalers. East of the fish plant on the north side of the bay large numbers of tiles were found along the shore and in areas recently bulldozed for a boat storage lot. A few areas of the original site still seems to be intact and should be considered for protection from future damage.

On high terraces south of the bay we found boulder structures and quartz debitage suggesting Maritime Archaic activity. No diagnostic tools were found, but the elevation - more than 40 m above sea level - calls for an early date.

The southern arm of Middle Bay contains 8-10 rectangular sod and stone foundations and a cemetery which dates to the last century. Some of the foundations appear to be from earlier periods. No Inuit-type house foundations were noted.

St. Paul and Old Fort Bays South of Middle Bay a wide belt of islands lies off the mainland, which is indented with small bays and river valleys. This area has been surveyed previously by Martijn (1974) who found many sites at St. Paul River, McAllister Cove, and Old Fort Village. Our attention was directed primarily at the outer islands where we hoped to locate Labrador Eskimo or Dorset sites. Despite considerable effort searching the Isle de la Baleine and Isle de la Baie areas, where surveys were hampered by a lack of surface exposures and thick ground cover, no prehistoric or historic sites attributable to Native American groups were found. A few features - caches and tent sites - occur in boulder fields and on exposed points, but none were culturally identifiable. Activity in the islands seemed limited to the last hundred years, today being used by fishermen who find the island harbours closer to summer offshore fishing grounds.

At this time of year aboriginal peoples would have been fishing in the bays and near the mouths of the rivers. Residents speak of seal hunting on the outer coast ice in winter and spring, but this hunt is neither as dependable nor as productive as it is in Labrador and Newfoundland. This situation is probably one of the primary causes for scanty signs of prehistoric sites in the outer islands. From an Eskimo point of view, the presence of an Indian threat may also have discouraged settlement.

Discussion with residents of Old Fort revealed their considerable interest in archaeology which seems to have developed over the years by the periodic discovery of sites in the town's roads, paths, and construction locales. Old sites continue to be visited and collected from, and people are on the lookout for new ones. A number of residents maintain small artifact collections while others have sold or donated collections to visitors. Still it appears that a number of sites could be salvaged. With information from new field data, old collections, and informants, it might be possible to develop a local sequence as was done in North West River (Fitzhugh 1972).

SUMMARY

Although this survey was brief, the following results have been obtained:
1. It is suggested that a detailed regional study of settlement patterns and culture history should be undertaken in the Port au Choix region. This area contains important sites that have not been studied and is one of the most

important archaeological regions in Newfoundland.

2. Barbace Cove and The Haven on St. John Island offer excellent opportunities to archaeologically investigate French exploitation and settlement history in north western Newfoundland.

3. Adaptation to the outer island region seems not to have been an important feature of prehistoric adaptations in this area of Newfoundland. No prehistoric sites were found on St. John Island, none were found and only small specialized sites were located on Dog Peninsula. Of particular interest in the latter area was a stone roadway associated with old beachlines.

4. A possible Labrador Eskimo site, perhaps the one occupied by Inuit seen by Sir George Banks in 1766 has been located on Degrat Island on the eastern end of Quirpon Island. The absence of Labrador Eskimo camps from islands and capes in other areas of the Cape Bauld-Cape Norman area suggests that an Inuit occupation of this area was by a small number of people, was of short duration, and was restricted in geographical area.

5. The tip of the Great Northern Peninsula and those areas surveyed along the west coast appear to have fewer prehistoric sites than the Labrador-Quebec side of the Strait.

6. The French fortress on Isle au Bois is a site of major importance that should receive historical and archaeological attention.

7. Basque sites have been located at Isle du Bassin and in Middle Bay, and there are suggestions of a European chert component in post-Basque, (probably 18th century) contexts.

8. Although there is considerable evidence for a long Indian prehistory and some evidence of Dorset culture between Blanc Sablon and Old Fort, we found no signs of Labrador Eskimos and little evidence that prehistoric groups utilized the outer islands with the intensity known in central Labrador. In part this may result from the absence of cultures with a heavily maritime oriented subsistence adaptation; it also suggests that walrus and seal availability is much reduced here.

9. Finally, surveys for historically documented Labrador Eskimo groups in southern Labrador and Quebec should be expanded. On the Quebec coast these sites may be difficult to find because Eskimo groups did not spend much time in the area, and because their dwelling foundations may closely resemble those of Europeans. In addition Eskimo material culture may look essentially European, since it was principally the lure of European goods that brought the Inuit to this coast in the first place.

10. Little new data was gathered on lithic sources. However the presence of quartz crystals in the Cape Riche limestone may not have been reported in archaeological literature previously.

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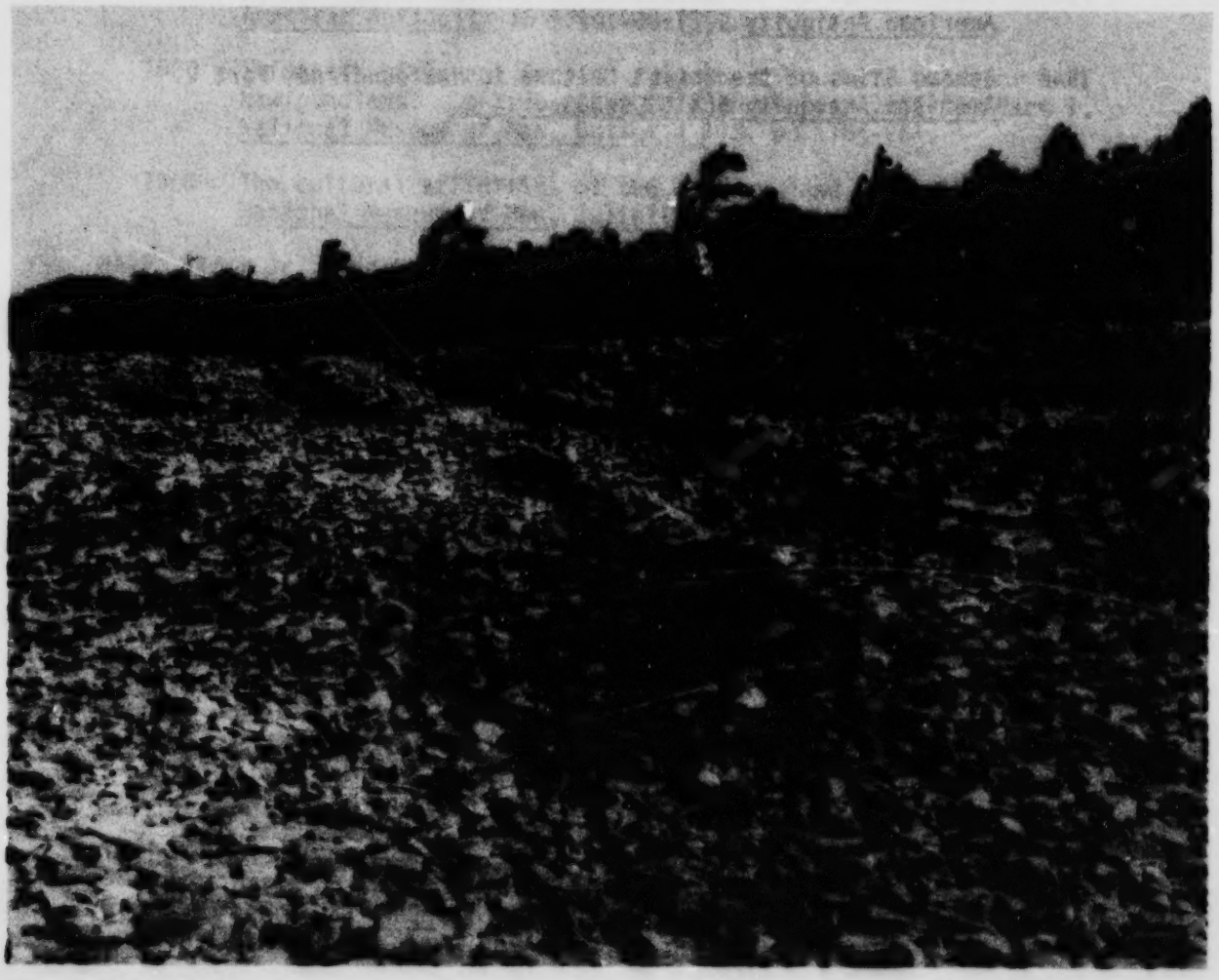
PLATE 1

Stone roadway at Dog Peninsula 1, Northwestern Newfoundland. Roadway disappears into scrub growth at top of angular slab beach series. Bottom of road has been truncated by rounded cobble beach-building. A similar feature occurs on the north side of the cove.



A PRELIMINARY REPORT ON INVESTIGATIONS AT BOYD'S COVE-1, A BEOTHUK AND RECENT INDIAN SITE IN NOTRE DAME BAY, NEWFOUNDLAND

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INTRODUCTION

Boyd's Cove-1 (DiAp-3) was located during a survey of eastern Notre Dame Bay in the summer of 1981. This survey was part of the Newfoundland Museum's Beothuk Project, a long-range programme designed to locate, assess, and investigate Beothuk sites in northeastern and central Newfoundland. Boyd's Cove-1 and the nearby Inspector Island site (DiAq-2), also located during the 1981 survey, were chosen for preliminary excavation because both sites revealed Recent Indian occupations with lithics typologically similar to those recovered by Carignan (1977) from the Beaches (DeAk-1) and Cape Freels-2 (DhAi-2), in Bonavista Bay. Although Carignan argued that the distinctive side-notched and corner-notched projectile points from the Beaches as well as the tiny stemmed and corner-notched points from Cape Freels-2 were produced by prehistoric Beothuk peoples, it was believed that there was not sufficient evidence to link these occupations, then speculatively dated to the first millennium A.D., to the historically known Beothuks. The primary goal of the 1982 field season was to recover data which would begin to answer this question. Other objectives were:

1) to identify the source of the lithic raw material found at both sites;
2) to acquire settlement and lithic data bearing on the nature of the relationship, if any, between these sites' inhabitants and the Recent Indian occupants of other areas in Newfoundland;
3) to investigate the nature of the subsistence patterns of the Boyd's Cove-1 and Inspector Island inhabitants;
4) to acquire information which would help to explain the nature, if any, of contacts between Europeans and the historic aboriginal occupants of both sites.

As it turned out, Boyd's Cove-1 proved to have an unexpectedly large historic Beothuk component and this persuaded us to shift our priorities considerably. Instead of spending an equal amount of time at both sites, we spent five and one-half weeks at Boyd's Cove-1 and three weeks at Inspector Island. The nature of the data recovered from Boyd's Cove-1 also led to a decision to place a much higher priority on objectives (3) and (4). This, therefore, is a report on our progress toward meeting the Boyd's Cove-1 objectives. A separate report on the Inspector Island site is forthcoming.

PROGRESS REPORT

Boyd's Cove-1 lies in eastern Notre Dame Bay, in a protected "run" just south of New World Island (Fig. 1). It is situated on a glacial moraine (Fig.3) averaging approximately 7 m above sea level. Below the site there is a narrow beach and immediately to the southeast there is a small stream which flows into the sea. Bordering the site on three sides is a dense, largely coniferous forest. Our 1981 survey had indicated a Recent Indian occupation confined to Area A (Fig. 2). In an effort to determine the size and nature of this occupation, we dug two 1 m by 10 m test trenches parallel to the beach. To our chagrin, however, these trenches revealed a highly disturbed stratigraphy characteristic of intensive European gardening. Other test pits were dug, but no features, nor, indeed, any undisturbed portions of this area were located. The test trenches did, however, produce a number of projectile points (Fig. 6, a-b) comparable to those reported from the Beaches, as well as side and corner-notched bifaces (Fig. 6, c-d) resembling those from English Point and the Iceberg site in the Strait of Belle Isle (McGhee and Tuck 1975). On typological grounds, these artifacts suggest an occupation beginning about 3000 BP and, if Area A were undisturbed, continued work there would provide some much-needed information to fill in the gaps in the island's culture history. Given the disturbed nature of all tested portions of Area A, however, we decided to turn our attention to Area B (Fig. 3).

Limited (and obviously inadequate) testing in 1981 had suggested a light European occupation in Area B. However, after clearing the brush and grass from this area we located eleven depressions, each of which was surrounded wholly or in part by a low earth wall. Two of the depressions were oval in shape, eight were roughly round, and one might be considered five-sided (although, given the rather blurred outline of a portion of the wall, perhaps "multi-sided" is a better term.) Suspecting that these were Beothuk housepits, we tested each by cutting a circular plug of sod approximately 30 cm in diameter just inside the presumed entrance. The deposition beneath the sod was examined without disturbing it. All of these test pits revealed a culture layer, and most of them also indicated either bone, shell, chert debitage, or iron fragments. The housepit we designated as House 1 was selected for testing because our initial test pit revealed a dense mass of bone and soft-shelled clam shells, and we hoped that the presence of these shells would result in good bone preservation.

Prior to excavation, a contour map of the house was constructed (Fig. 5). Excavation then proceeded by extending a 1 m wide trench through the entrance to the opposing wall, and then bisecting the house again with a similar trench (Fig. 4). Although perhaps not the ideal method to dig such a house, this strategy did allow us to retain stratigraphic control and to discover the house's main features as rapidly as possible. (Given our commitment to investigate Inspector Island, as well as the effort already spent in Area A, we felt somewhat pressed for time.) Following initial trenching, selected 1 m squares inside the house were dug and one trench was extended through the northwest portion of the wall. In front of the house, ten 1 m squares were dug in checkerboard fashion in an attempt to find features associated with the house.

Work proceeded slowly due to the richness of the midden. Eventually, a midden area, ca. 1.5 m by 4.25 m and from 10 cm to 25 cm in depth was excavated. Over 9 kg of shell and over 3 kg of bone were recovered; this we believe to have been approximately 90% of what remained of the original midden. Because this midden overlay a portion of the central hearth and extended from that hearth through the entrance to a point outside the house, and because so many of the shell pieces recovered were so large, we believe that this midden was deposited after the abandonment of the house. It is difficult to see how such large shell pieces would remain unfragmented in a midden situated in an entrance-way. (It was also difficult for us to imagine how the house's occupants could have shared the dwelling with a rich and likely malodorous midden.) We believe, therefore, that this midden was created by the occupants of House 11, a smaller housepit situated immediately adjacent to, and to the northeast, of House 1. Indeed, the deposition pattern of the midden material suggests that it was thrown into the house from the northeast. The resultant bone, including a number of tiny fishbones recovered after flotation, has been sent to Dr. Stephen Cumbaa of the Zooarchaeological Identification Centre, National Museums of Canada, and we expect that his analysis will tell us a great deal about the seasonality of the site as well as the subsistence preferences of its inhabitants.

Although differing in some details from other housepits reported from Newfoundland, in general, the Boyd's Cove-1 House 1 is comparable to LeBlanc's Feature 14 at Wigwam Brook, Devereux's House 4 at the Beaches, and her B5 locality housepit at Indian Point, as well as Sproull Thomson's House 1 at

Indian Point (LeBlanc n.d.; Devereaux n.d.a, n.d.b; Sproull Thomson 1982). Measuring from opposing wall crests, House 1 is approximately 8.1 m by 6.9 m, is multi-sided, and contains a central hearth. The hearth was evidenced by small amounts of charcoal, a scattering of fire-cracked rock, and red, oxidized subsoil. The westerly portion of the interior was characterized by an almost complete absence of rocks and a thin, 2-3 cm culture layer. This we interpreted as a sleeping area. Between the hearth and the sleeping area were several lenses of grey-brown soil containing heavy concentrations of burnt and unburnt bone mash. In the southerly region of the house, between the hearth and the wall, we found a depressed area which we believe to have been a sleeping hollow. Characteristically, the culture level here was a thin, 2-3 cm, black, greasy layer. The easterly portion of the house's interior was characterized by fire-cracked rock and pieces of burnt and unburnt bone. This material overlay a thin, black, relatively rock-free layer, and it is possible that this sector was also a sleeping area which at some time served as a repository for hearth debris. The absence of red, oxidized subsoil in this part of the house suggests that it was not part of the hearth.

To the northeast, an approximately 1.5 m break in the wall suggested an entrance. This entrance faces away from the beach and away from prevailing winds. Cross-sectioning one of the westerly walls and examining the profiles of the wall and the adjacent interior floor suggests that the interior of the house was excavated and the resultant fill was used to build up the walls. (The profiles of the interior revealed no leached ashy-grey A_2 horizon below the culture layer. This A_2 horizon, characteristic of Newfoundland podzols, was found everywhere else on the site outside of the housepits.) Although a trench was not extended all the way through the easterly portion of the wall, profiles of this area indicated that this part of the house was constructed in the same manner. A part of the easterly portion of the house appears to have been built upon an older occupation, and as a result the easterly wall fill contained buried sods, charcoal, fire-cracked rocks, and chert flakes. The outlines of this easterly wall were less distinct than the rest of the walls of House 1, the result, perhaps, of the inhabitants of House 11 using earth from the walls of House 1 to construct their own dwelling.

Surprisingly, we found ten interior features, some or all of which may be post moulds. Six of these possible post moulds were found in the interior of the house at the base of the walls. Four similar features were located

at some distance from the walls. These may be related to roof supports, or they may pertain to interior structures, references to which are found in the ethnographic literature (Howley 1915:79). If these features are, indeed, post moulds, further excavation of House 1 should make their configuration more intelligible.

In all, 20 m^2 inside House 1 were excavated, as well as 17 m^2 in other parts of Area B. These excavations have yielded some very suggestive information about Beothuk-European relations. Several hundred iron objects were recovered, including numerous wrought nails, many of which were aboriginally modified (Fig. 7, a-b, d-e), pieces of a cast iron pot (Fig. 7,c), a fishhook, a portion of a knife blade, and numerous pieces of as yet unidentified wrought and cast iron. A number of the more complete artifacts, such as the two projectile points made from nails (Fig. 7, d-e), have undergone electrolysis; all of the iron is presently kept in a solution of 2% NaOH prior to further conservation.

Perhaps the most exciting find was the recovery of nearly 300 blue and white trade beads. They have been identified by Mr. Karliss Karklins of Parks Canada as wire-wound specimens, classified according to the Kidd system as: "IIa12. Circular, translucent oyster white (b) shiny surfaces, 3.1-3.8 mm diameter (small size), and IIa56. Circular, transparent bright navy (13 pg), shiny surfaces, 3.4-3.8 mm diameter (small size)". Such specimens are commonly called "embroidery" or "seed" beads and, according to Karklins, "are useless for dating their archaeological contexts because of their extremely long temporal range; they were among the earliest varieties brought to the New World and continued to be made well into the 19th century..." (Karklins, pers. comm.).

Unfortunately, this lack of chronological specificity has characterized most of the artifacts recovered from Boyd's Cove-1. The profusion of wrought nails suggests an occupation dating from before the last decade of the 18th century, but the other iron objects, such as the possible trap part illustrated in Fig. 11, have, as yet, provided no clues to the chronological dimensions of Area B.

There are, nonetheless, a few indications of the age of Area B: 1) House 1 yielded four pipestem fragments with bore diameters of 7/64", and while this sample is too small to warrant employment of the Binford-Harrington formula, it is a slight bit of evidence suggesting a late 17th

century occupation (Hume 1970:298). The Binford-Harrington formula, however, applies only to English pipestems. Although the focus of the French fishery in this area lay to the north of Notre Dame Bay in the 17th and 18th centuries, the possibility that the Boyd's Cove-1 pipestems are of French manufacture cannot be ignored (Head 1976:14-15, 176).

2) The coastal location of Area B argues for an occupation before the 1720's. Archival evidence from the British Public Record Office (on microfilm at the Newfoundland Provincial Archives) indicates that the earliest land-based European presence in the area occurred in Dog Bay (6 km east of Boyd's Cove) in the 1720's where an English entrepreneur carried on a salmon fishery (C.O. 194/8, f.11). It is difficult to imagine that conspicuous pit houses would be inhabited for very long after Europeans had begun a land-based exploitation of nearby coastal resources.

3) Writing in 1768, John Cartwright, who had been sent by the naval governor of Newfoundland on a mission to make contact with the Beothuks, remarked that "there are traditions amongst the English inhabitants of Newfoundland which prove that an amicable intercourse once subsisted between them, and the natives..." (Howley 1915:29).

The possibility exists, therefore, that these beads were acquired by the Beothuks from white inhabitants, perhaps from Bonavista or Trinity Bay, in the late 17th or early 18th centuries. If this interpretation is correct, then Boyd's Cove-1 will provide us with archaeological evidence for a period in Beothuk history about which we know very little. Between John Guy's contact with the Beothuks in 1612 and John Cartwright's visit to abandoned Beothuk camps along the Exploits River in 1768, there is an almost complete lack of reference to the Beothuks in the historical record. The possibility of a trade having existed between Europeans and Beothuks during that period is tantalizing. It must be admitted, however, that the evidence we have recovered from Boyd's Cove-1 is far from conclusive. Aside from the beads, only the knife and the kettle are suggestive of a former trade - and these too could have been obtained by stealing from fishermen's premises. The beads, however, are the sticking point; it is very hard to see how they could have been the result of a theft. There are, nonetheless, at least two other potential explanations for the appearance of these beads. They may have been acquired as presents, perhaps left in a likely place by Europeans who had begun to move into the area and wished to forestall conflict. Or, they may have been acquired by the Beothuks as a result of interaction with Micmacs, Labrador Indians, or even Inuit.

Only more research, archaeological and historical, can resolve the question.

In addition to the enigmatic clues to Beothuk-European relations that Area B has provided, it has also yielded some indications of its inhabitants' material culture and technology. In addition to the artifacts mentioned earlier, House 1 also contained two lumps of iron pyrite, a number of small lumps of red ochre, as well as several ochre stains in the living floor. Bone artifacts included a number of fragments decorated with incised lines (Fig. 8, g-i), one tiny complete ornament (Fig. 8, j), a probable mattock and an awl. Two large discoidal shell beads (Fig. 8, k) were recovered as well as a number of beads apparently manufactured by cutting thin sections of pipestems (Fig. 8, a-f). (Unfortunately, the bore diameters of these beads were too enlarged to permit dating.)

Test-pitting outside House 1 located a part of what appears to be a large hearth composed of a great many small, fire-cracked rocks, and a representative sample of small projectile points (Fig. 9), triangular bifaces (Fig. 10), a Ramah chert flake point (Fig. 12, a), two endscrapers (Fig. 12, b-c), and a number of linear flakes (Fig. 12, d-l). This assemblage is characteristic of the Little Passage Complex, a Recent Indian culture dating (at present) from 1900 BP to 690 BP, and reported from Bonavista Bay, Trinity Bay, and the South Coast.

We believe that there is a strong possibility that the makers of these Little Passage tools were the ancestors of the historic Beothuks, but as yet this cannot be demonstrated with confidence on the basis of the evidence at Boyd's Cove-1. For example, no Little Passage points were found inside House 1, although several were found in the entrance. That entrance, unlike the interior of the house, was not excavated by the house builders. Had the entranceway been excavated, the House 1 occupants would have removed cultural material from older occupations, and any artifacts found in that entrance would have dated to some time during or after the occupation of the house. As it was, we found evidence of what appeared to be an historic Beothuk occupation overlaying an older Little Passage presence. Below the shell midden level in the entrance, we found a greasy, black culture layer which contained Little Passage artifacts. It must be said, however, that Little Passage points were also found here at the same depth as, and even above, iron objects. Mixed cultural deposits are very common in Newfoundland's shallow soils, due, perhaps, to such agents as frost-heaving and forest fires. Because of this, we do not feel that this is convincing evidence that the

Beothuks were still making Little Passage tools in the 17th century. A bit more convincing, however, was evidence from House 5, a small circular depression near the lip of the moraine (Fig. 2). Here, a 1 m by 2 m test pit inside the house (in an area excavated by its occupants) revealed an iron object tentatively identified as a trap part (Fig. 11) and a crudely-made triangular biface (Fig. 10, f). Still, this evidence must be labelled suggestive rather than conclusive. Only future work will produce the necessary data to demonstrate or disprove a connection between the Little Passage occupants and the Beothuks.

In conclusion, Boyd's Cove-1 offers an unusual opportunity to illuminate the late prehistory and early history of the island. In future, we plan the following:

1) to complete excavation of House 1 and its immediate environs;
2) to excavate completely House 8, a large oval housepit isolated from the others;
3) to excavate enough of the House 8 environs to be able to locate associated features;
4) to excavate House 11, whose midden we believe we have already investigated;
5) to test other sectors of Area B in an effort to acquire data bearing on the possible link between the Little Passage Complex and the historic Beothuks.

ACKNOWLEDGEMENTS

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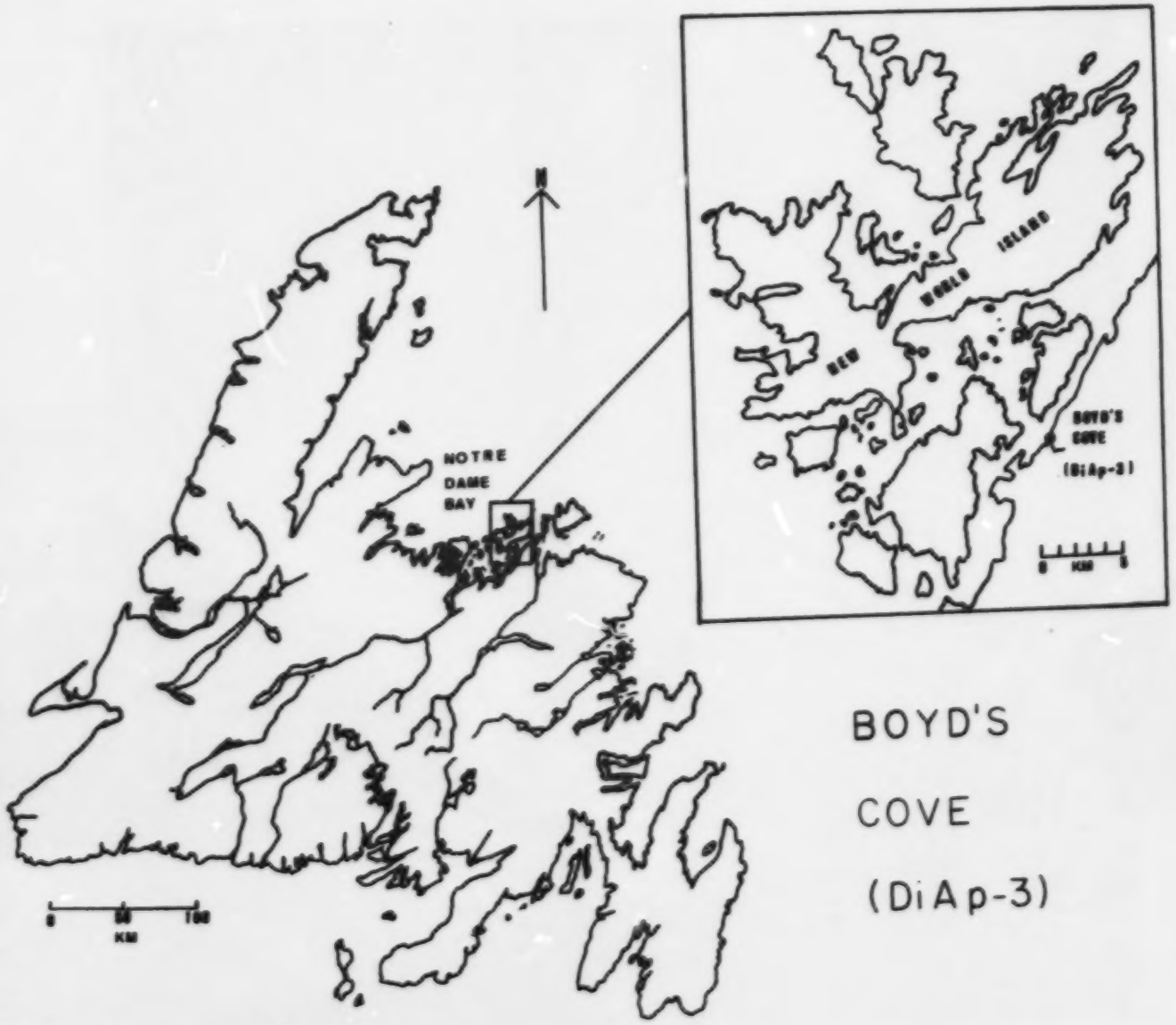


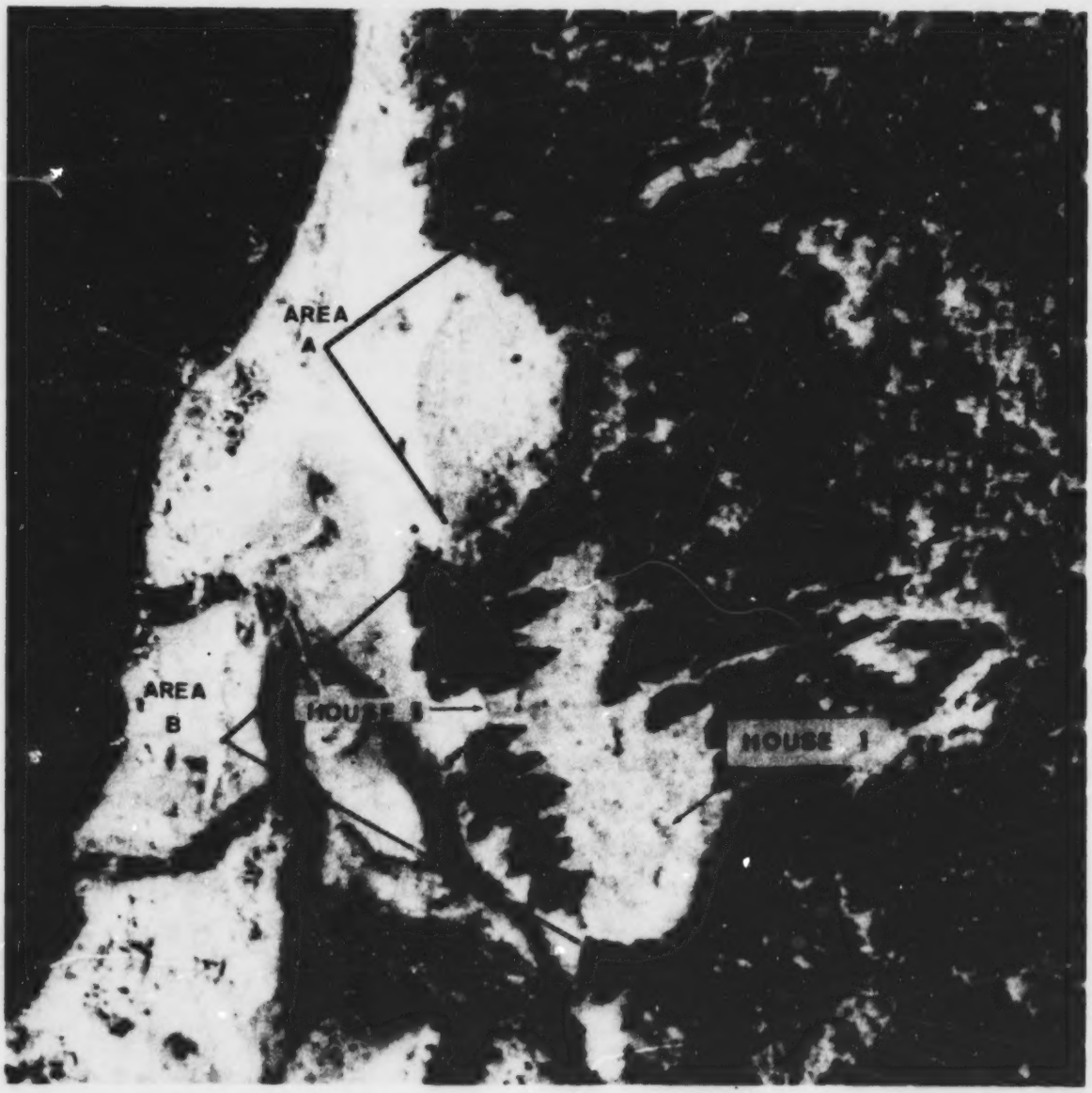
BOYD'S

COVE

(DiAp-3)

Fig. 1

Fig. 2

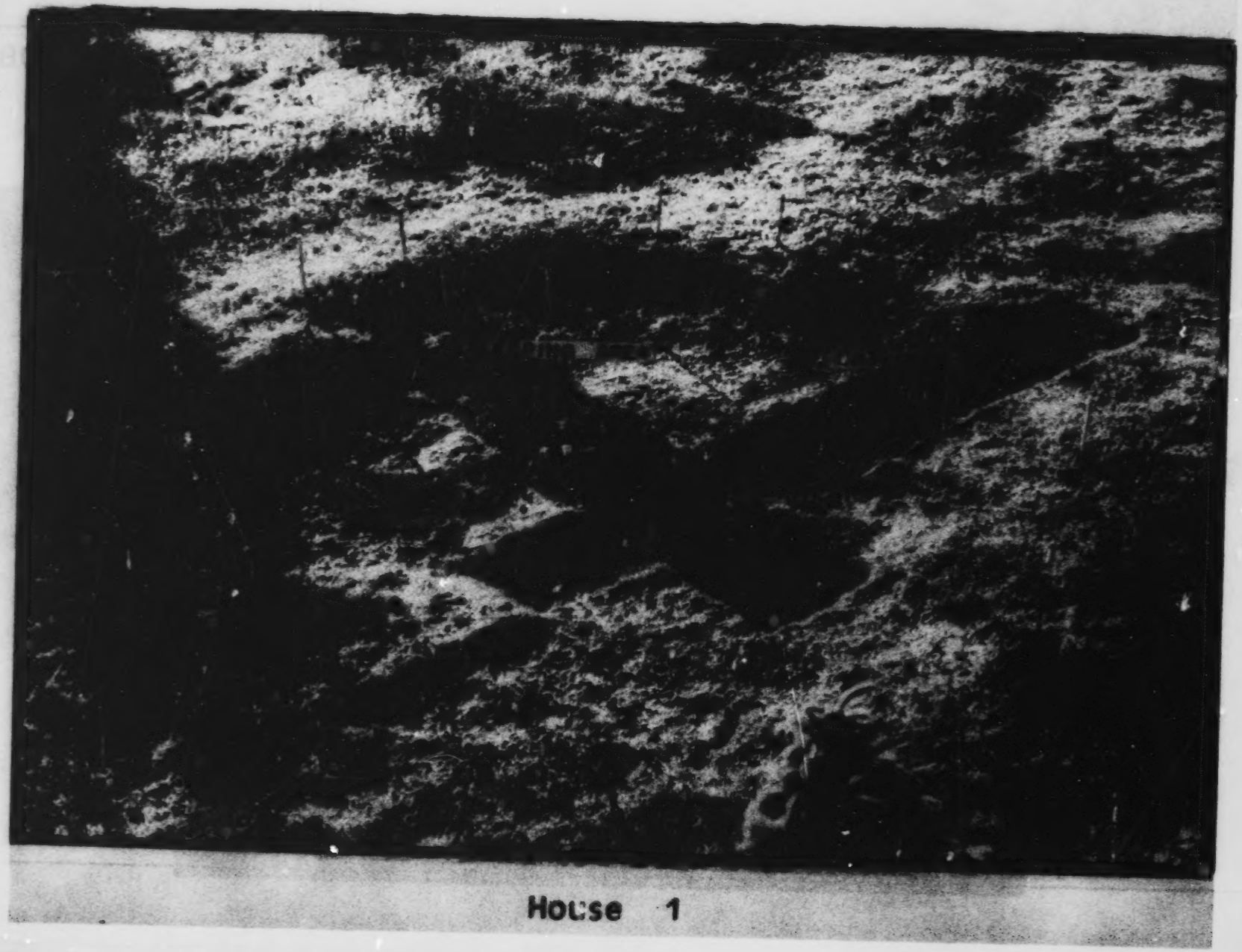


BOYD'S COVE-1 (DiAp-3)

Fig. 3

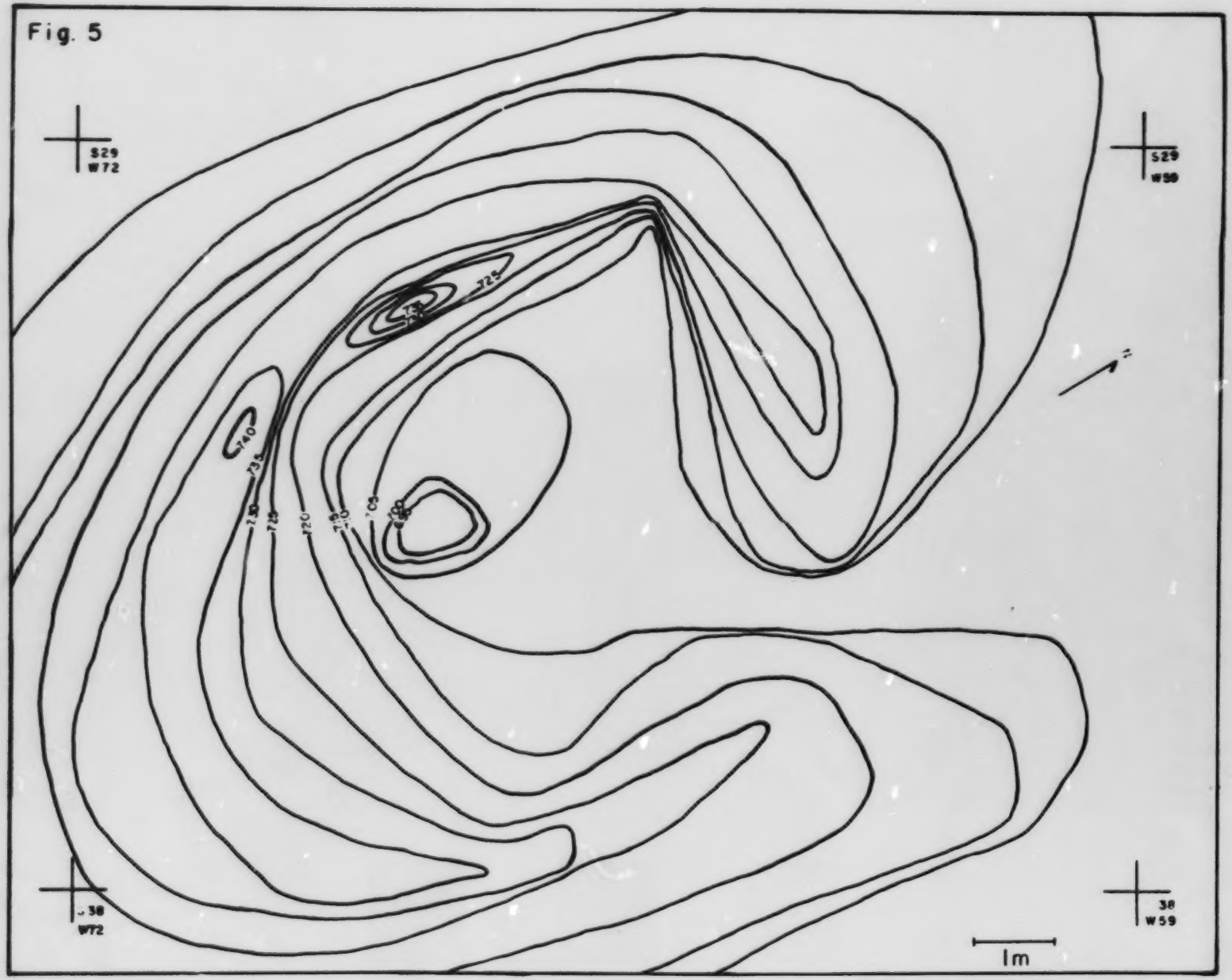
BOYD'S COVE-1 (DiAp-3)

Fig. 4



House 1

Fig. 5



HOUSE 1

BOYD'S COVE

Contour Lines are in m a.s.l.

FIGURE 6

a-b. corner-notched projectile points

c. side-notched biface

d. corner-notched biface

Fig. 6

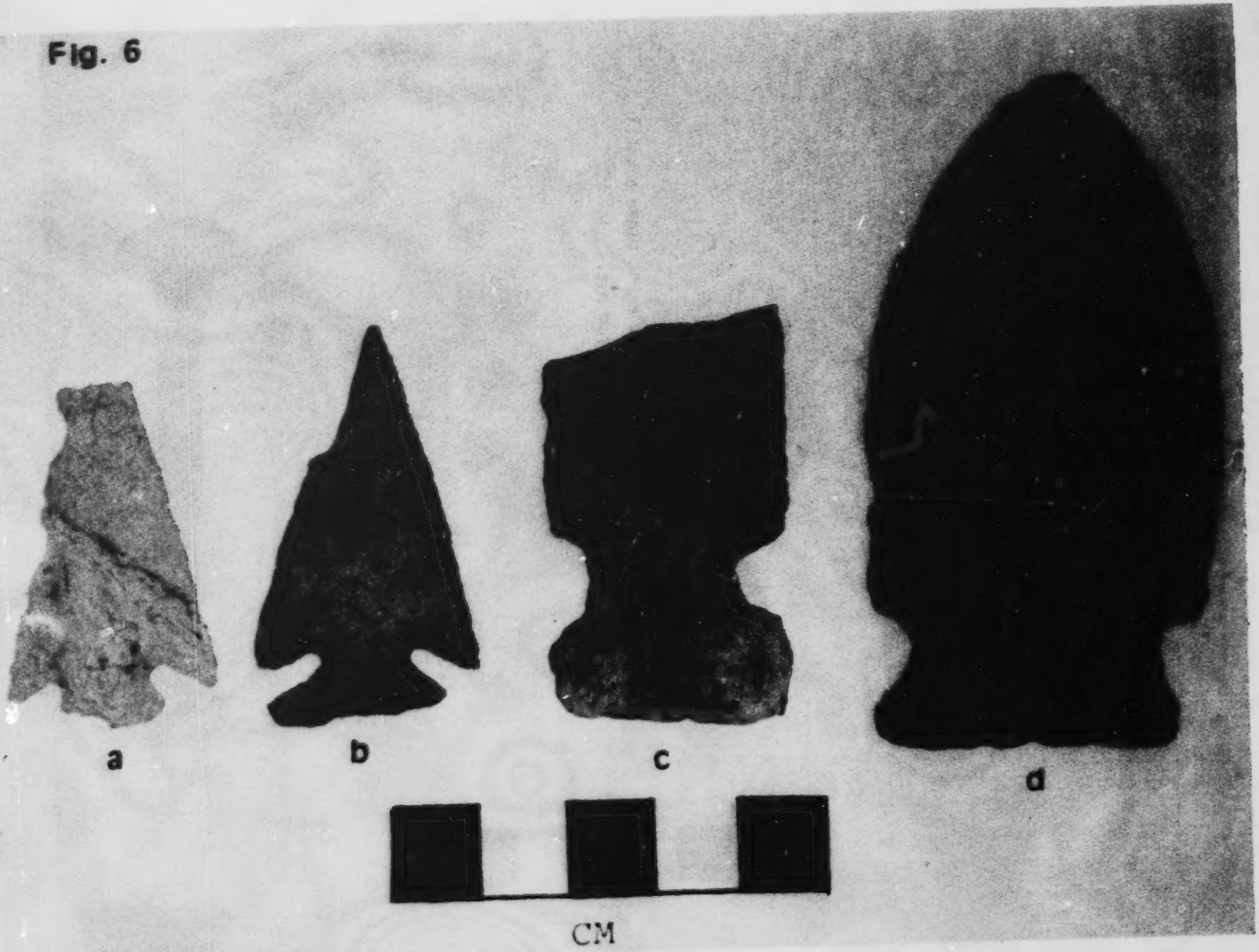


FIGURE 7

a. modified nail
b. modified nail portion
c. cast iron fragment (possible end blade blank?)
d-e. projectile points made from nails

Fig. 7

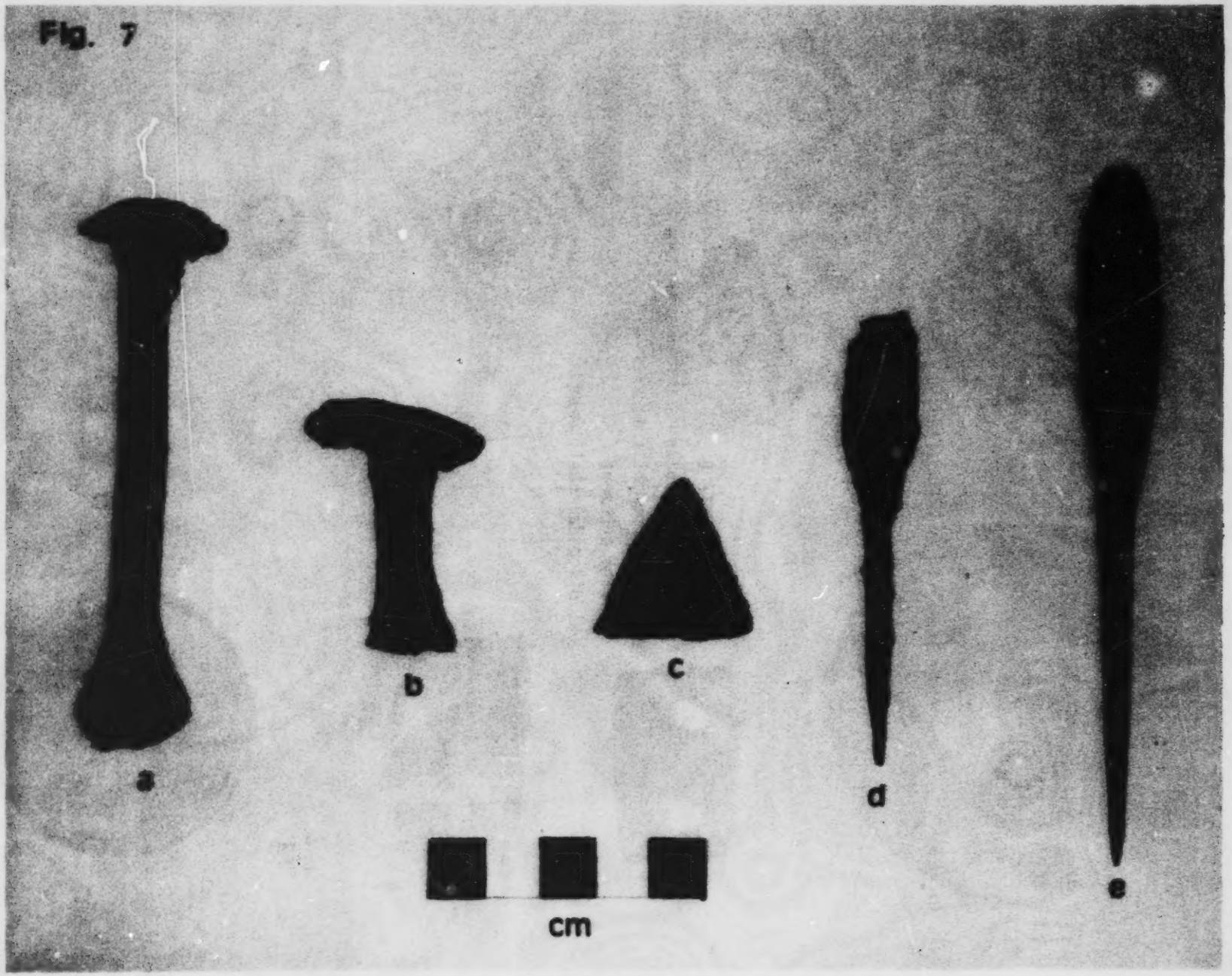


FIGURE 8

a-f. discoidal beads made from pipestems

g-i. bone ornament fragments

j. bone ornament

k. discoidal shell bead

Fig. 8

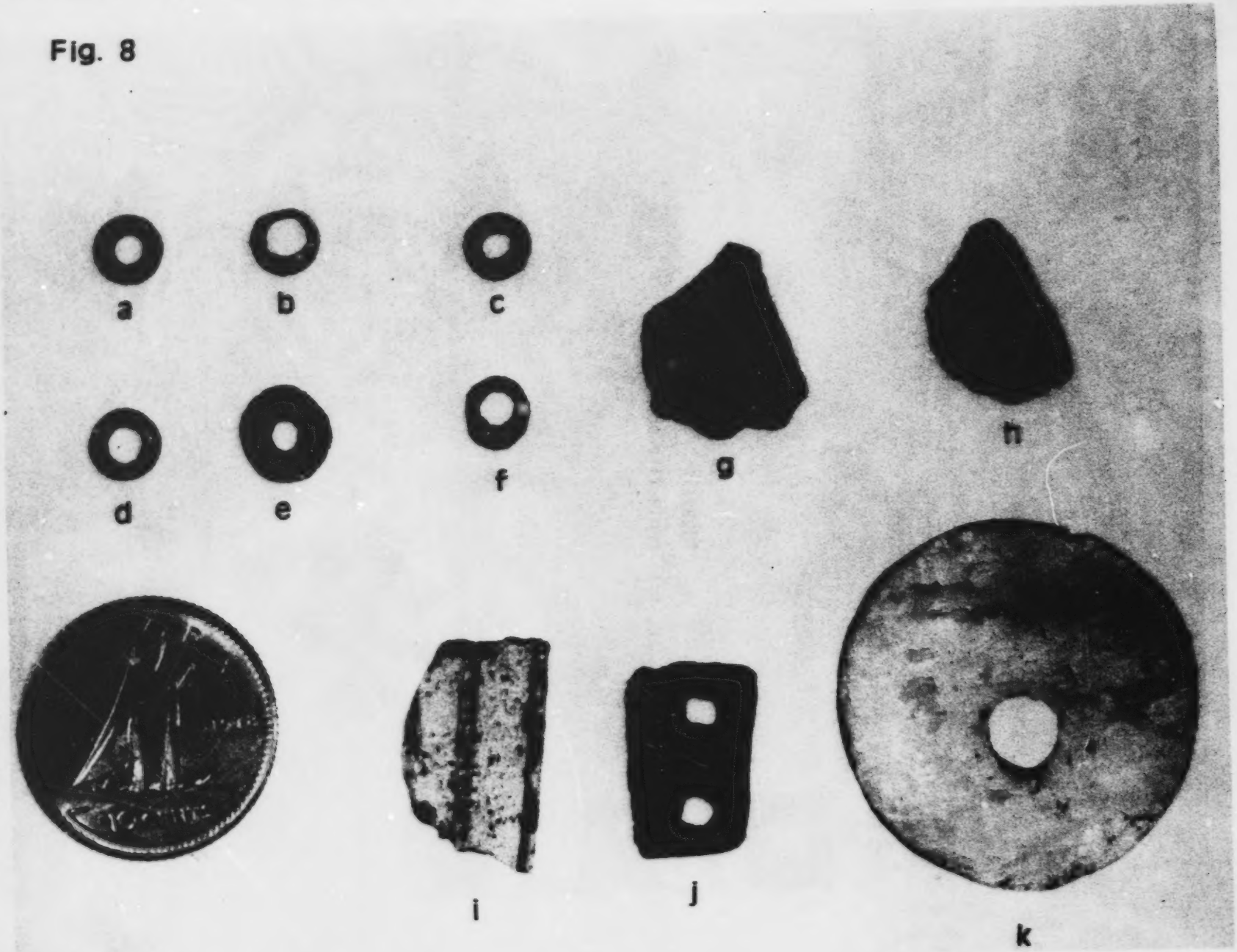


FIGURE 9
a-k. projectile points

Fig. 9

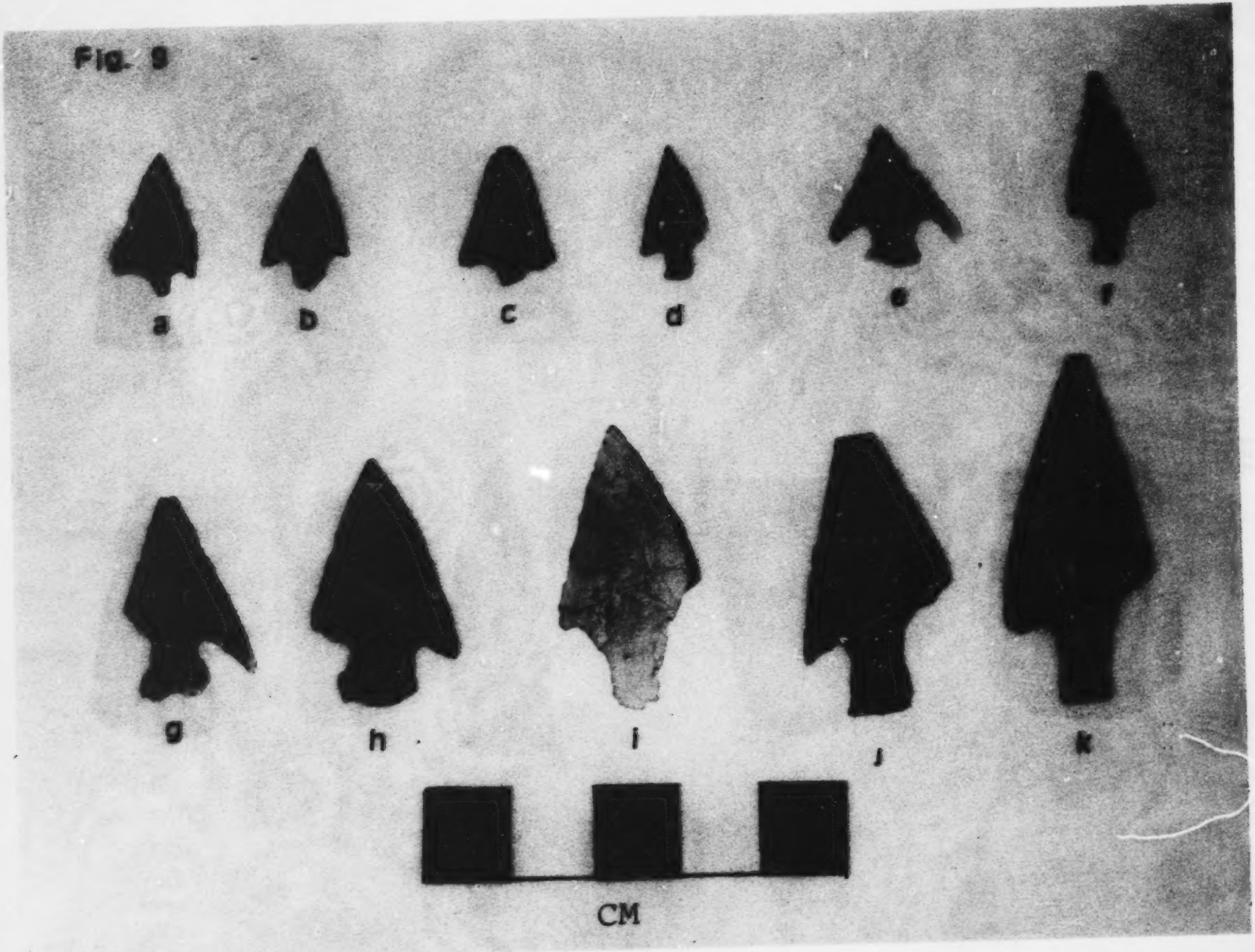


FIGURE 10

a-j. Triangular bifaces

Fig. 10

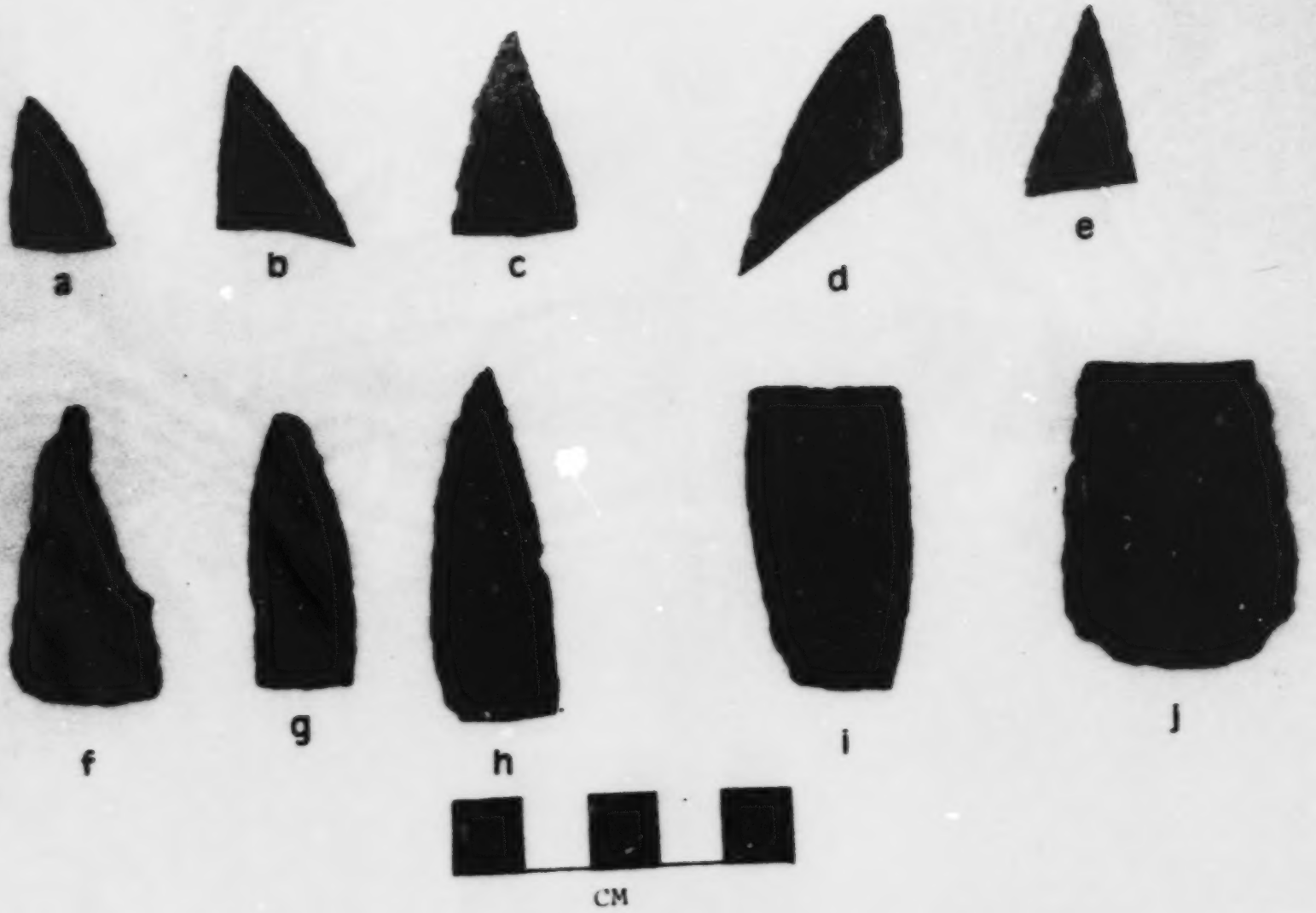


FIGURE 11

Wrought iron object (trap part?)

Fig. 11

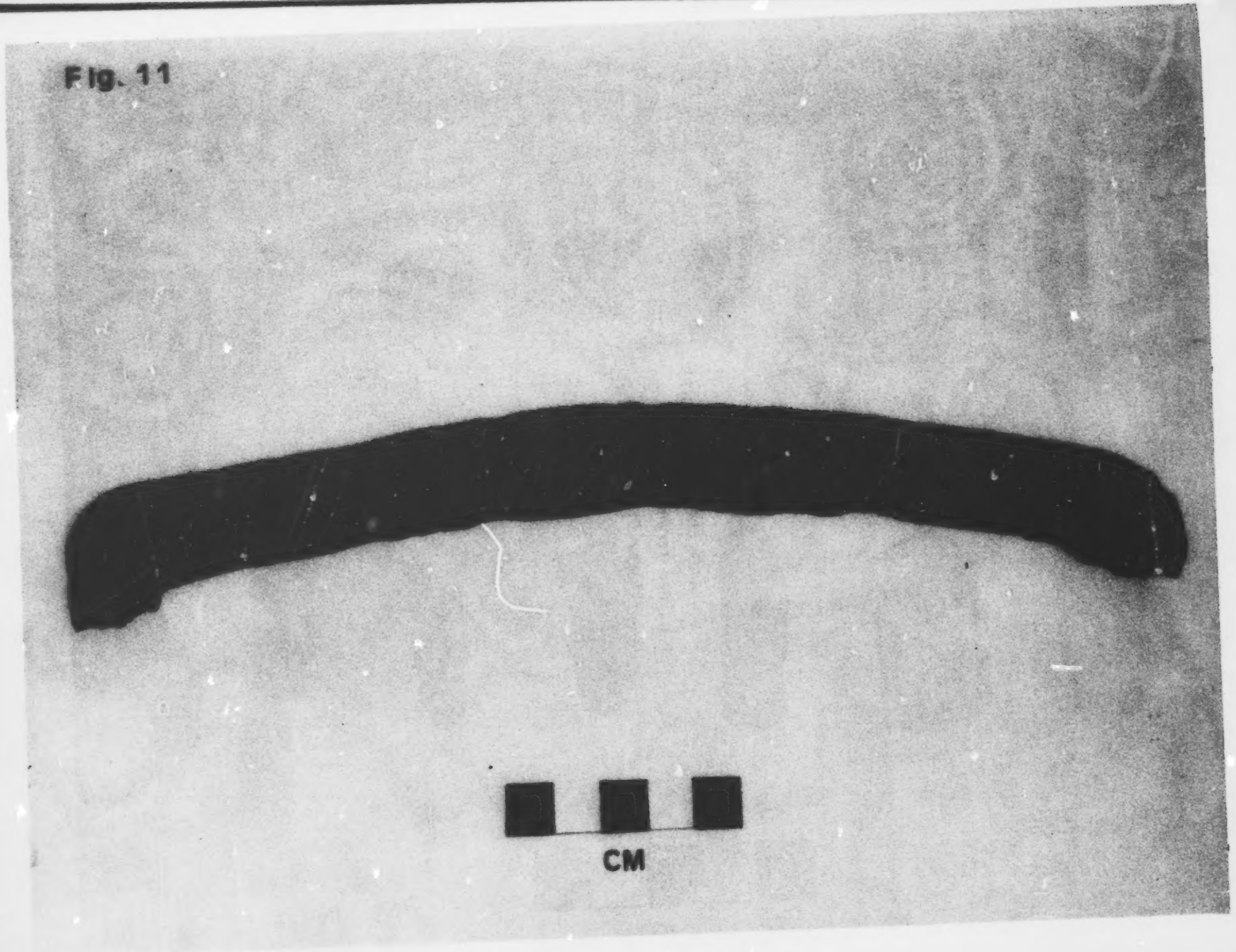
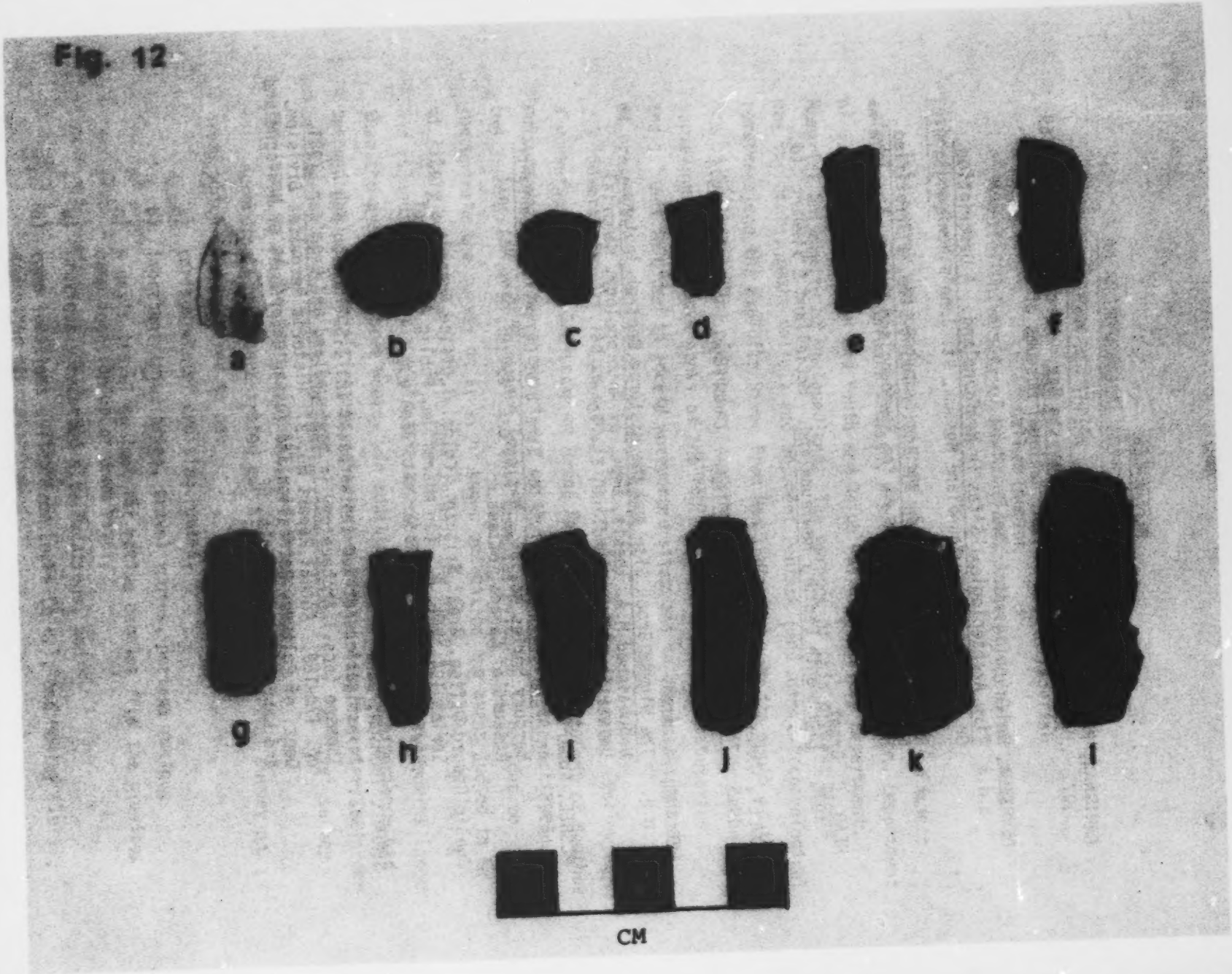


FIGURE 12

a. Ramah chert flake point
b-c. end scrapers
d-l. linear flakes

Fig. 12



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AN ARCHAEOLOGICAL SURVEY OF THE EXPLOITS RIVER FROM RED INDIAN LAKE TO GRAND FALLS MAY 29 - JUNE 19, 1982

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INTRODUCTION

This survey was conducted as part of the multi-year Beothuk Project co-directed by Jane Sproull Thomson, Historic Resources Division, Department of Culture, Recreation and Youth and Ralph Pastore, History Department, Memorial University of Newfoundland. The purpose of this present phase was to locate, test, delimit and document Beothuk (and other) archaeological remains along the Exploits River from Red Indian Lake to its mouth at the Bay of Exploits. The planned strategy was to travel downriver by canoe, surveying on foot both banks of the 100 km long river, its tributaries and islands in order to locate unreported sites and to check on the state of preservation of previously-known sites.

Several factors led to a decision to change this strategy. Following a conversation with Don Locke of Grand Falls, a long-time student of Beothuk culture with many years experience on the Exploits River, and acting on my own assessment of historical and environmental evidence, I decided to concentrate the survey on areas of known occupation and areas judged to be of likely occupation. I felt that to walk the whole shoreline, branches and islands efficiently would take two people at least several months longer than the available three weeks. In addition, our canoeing experience had been minimal and some tricky manoevering would have been necessary in order to cover effectively all the banks. Finally, our first few days' survey convinced me of the impracticability of this course.

Accordingly, we concentrated our efforts in this initial survey on areas which we considered to be:

a) caribou winter crossing routes,
b) important tributaries, travel routes, portage routes,
c) a day's travel on foot for native peoples from the previous camp location up or down river,
d) previously recorded site locations, and
e) camp locations culled from Locke (n.d.), and Howley (1915), and other sources.

Some of these alternatives were among the suggestions put forward by Don Locke. During an interview with him on May 28 he shared with us much of the information which he had collected during his many years on the Exploits. The following list of sites and site clusters was compiled during this interview; in the course of our survey we checked on the state of preservation and recorded most of them:

Red Indian Lake
Noel Paul's Brook
Red Indian Falls
Two Mile Island
Pope's Point
Slaughter Island
North Angle
Nimrod's Pool
Aspen Island
South Exploits
Bishops Falls
Rattling Brook

A study of the distribution of these seemed to support Locke's contention that the major sites were located at strategic hunting locations, a day's travel from the previous group of sites or both, a pattern evidently supported by Cartwright's 1768 sketch map (Howley 1915: Plate 2). Thus the concentrations appear at present-day Millertown, Noel Paul's Brook, Badger, Grand Falls, Bishops Falls and upper Bay of Exploits, all roughly 20-30 km or a good day's travel apart (Map 1). While accepting this reasoning we nonetheless determined to check other potential site locations en route.

The Exploits River, transecting as it does a large part of central Newfoundland, acts as a natural barrier to caribou retreating in early winter from the northeast coastal area to the sheltered, more vegetated inner regions of the island. Herds must cross the river in certain favourable locations where low banks permit easy access and egress. Cartwright notes that some Beothuk in the eighteenth century also abandoned the coast in winter and headed up the Exploits where they erected brush and tree fences atop low banks in order (presumably) to channel herds to ambush locations or from behind which to shoot individual animals (Howley 1915: 38-9). In addition the river offers a clear opportunity for sighting caribou in an otherwise dense forest. It is also probable that while in the interior

the Beothuk took advantage of other game such as beaver, hare, fox, marten, ptarmigan and perhaps fish during this season. Substantial dwellings would have been erected for shelter, probably of the birchbark-covered wigwam or mamateek type (ibid.: 29-30), with a foundation partially dug into the soil. As most of the region is heavily wooded it is unlikely that any tools, utensils, food bones or other debitage left by the occupants would now be visible, so it was these foundation remains, shallow depressions in the ground, that we sought as evidence of Beothuk occupation.

NARRATIVE

As we drifted sideways out of control towards the first bend in the Exploits on the initial day of our survey, an observer on the shore was struck by sudden doubts as to our ability to complete even one day with dry clothes, far less the planned three weeks. We managed to extract ourselves from the log jam which had pulled in our canoe like a magnet and spent much of the remainder of the day attempting to develop some technique and control, eventually gaining sufficient confidence to shoot rather than portage the numerous rapids (I must confess that the first set was shot entirely accidentally).

Both Cartwright's map and Locke's information indicated that the first 25 km or so would be sparsely populated with Beothuk sites, probably because an overland shortcut to Red Indian Lake was favoured over the longer river route (Locke 1982: personal communication). Our surveys of the shores confirmed this; the first group of housepits which we encountered was at the confluence of the Exploits and Noel Paul's Brook (Map 1). Here we found a total of three sites, including one prehistoric, and were later told that we had missed a further two sites.

The appearance of the first housepit characterized most of those we were subsequently to find, with the exception of its size. This one was a good 8 m in diameter from one crest of the wall to the other, whereas many were up to 4 m smaller. Being a single housepit was also exceptional - most sites contained three or more structures. The outside wall was of banked-up soil presumably removed from the interior of the house. The wall measured up to 20 cm above grade while the maximum interior depth was 40 cm below the top of the wall. Clearly visible at the centre of the interior was a raised hearth area which

contained charcoal, burned and unburned bone, fire-cracked rock fragments and a few pieces of mussel shell. Around the hearth were arranged several sleeping hollows. No doorway was visible (Plate 1).

Cultural material, mostly bone, burned bone fragments and mussel shells, was also plentiful around the inside perimeter of the structure, presumably where waste was thrown against the wall. In some houses were found one or two rocks present on an otherwise cleared soil floor; test pits placed near these rocks invariably produced iron fragments confirming the theory proposed by Locke (personal communication) that these rocks functioned as anvils for fashioning tools out of European iron.

Structural features such as postmoulds were not found in any of the houses, perhaps because of our limited testing; the occasional pole-like remains which we found below the surface are as likely to have been the remains of fallen trees as tent poles. We did find in several houses what we thought were the distal ends of roasting sticks and arrow shafts as illustrated in Howley (1915: Plate XXXIII), sharply pointed 20-30 cm long, 1-3 cm wide fragments of wood. We were later embarrassed to discover that these were dense knot plugs from branches and trunks which deteriorate more slowly than their parent trees and branches.

Many of the housepits which survive are fairly well preserved as far as overall structure is concerned but many have obviously been dug over or searched with metal detectors, thus disturbing stratigraphy and depleting artifactual contents. Common to all of the housepits was the absence of lithic material and the presence (in many) of iron, suggesting historic occupation by Beothuk Indians. The substantial nature of the house foundations and the abundance of caribou bone within them, perhaps to the exclusion of any other mammal bone, stresses the importance of the interior winter caribou hunt in the late Beothuk seasonal round.

We had not expected to see caribou in our travels, but we did see a large number of moose, beaver, trout, and blackflies, and were once attacked by a ferocious mink which evidently thought our canoe was an elongated moose and came streaking through the water at us. Fortunately, threats and obscenities were sufficient to turn it back to the bank.

The second major group of sites was located between Noel Paul's Brook and Badger, the Red Indian Falls sites. The river now was wider and faster and had evidently done more damage than at the preceeding sites. Most

of the housepits here were located close to the water, some had suffered partial erosion and a few were waterlogged. In addition, logging activity has left the banks in a mess, with tangled new growth, rotting debris, windfalls, eroding soil, bulldozed tracks, abandoned lumber and garbage-strewn camps. This is perhaps to be expected where logging is the prime industry but creates a nightmare for the surveying archaeologist.

Our one major portage was the Red Indian Falls, an impressive drop of several metres requiring a portage of about 100 m. We later heard that an intrepid woodsman had taken a barge over the falls, but the noise and obvious power of the falls were quite sufficient to remove any vestiges of intrepidity from this crew and we resorted to humping canoe and gear down to the foot of the falls.

According to the Cartwright map (Howley 1915) the Badger area was heavily populated by Beothuks. About twenty housepits and several fences are shown in the vicinity of the confluence of the Exploits and the two rivers which flow through Badger to join the major river. We were told by local informants that caribou still migrate through this region in substantial numbers and that salmon and trout are plentiful. We were also told, however, and could see for ourselves, that artifact hunting and floods have taken a severe toll on local sites. The shores of the rivers, the mid-stream islands and much of the low-lying hinterland are subject to flooding, ice-rafting, erosion, silting and pulp log deposition, contributing to heavy site destruction. Perhaps of a less harmful but certainly more irritating nature is the common local practice of looting by shovel and/or metal detector. These activities, ferry terminals, logging roads, town expansion and even the digging of worms for bait have all succeeded in severely depleting the cultural resources of this once-rich area.

Between Badger and Grand Falls another problem is contributing to site attrition: the presence and occasional raising of the dam at the Grand Falls pulp mill. Water, ice and logs back up many kilometres from the dam and what sites are not now permanently under water are seasonally inundated. Several years ago an authentic-looking and very popular interpretation centre was built on one of the Exploits islands but had to be abandoned when unusually high water leverls damaged many of the reconstructions of Beothuk dwellings and swept away the ferry wharves.

Just above the town of Grand Falls the flooding is so extensive that some of the islands shown on a 1971 topographic map have now disappeared. Quarry operations, log booms, access roads, and logging have also added to the

great diminution of the archaeological potential of this region. It is fortuitous that previous excavations have already resulted in a small collection of artifacts from these sites, as many of them are now lost.

We had intended making a detour around the towns and falls at Grand Falls and Bishops Falls but could not arrange lifts for our canoe and gear. Instead we spent our last couple of days writing up notes and enjoying the hospitality of the Scott James family. Mr. James is a keen student of the Beothuks and has built two replicas of Beothuk canoes. We had the pleasure of testing one of these at sea in West Arm, Notre Dame Bay, and found it surprisingly stable, fast and dry once weighted down with ballast rocks. Its manoeverability was not the best, probably partly due to our caution and inexpertise, but the experience made accounts of Beothuk voyages to the Funk Islands much more credible.

Our survey was at an end; we had not completed our objective - to survey the entire length of the Exploits -but had found, tested and recorded most of what remains of Locke's previously-recorded sites and added five new ones to this inventory. We had enjoyed canoeing through scenery of great beauty and natural interest, met some interesting and informative people, and generated within ourselves an unexpected level of enthusiasm for interior archaeology and travel. On a less positive note, we had witnessed the continuing destruction of the Province's archaeological remains by the direct and indirect actions of companies and individuals, and realised the enormity of the battle which must be waged to protect Newfoundland's cultural resources.

SITE DESCRIPTIONS

Due to the high level of attention given to Exploits sites by artifact collectors, no details of their locations will be given here. A complete report of the survey is on file at the Historic Resources Division, Newfoundland Museum, Duckworth Street, St. John's (Thomson 1983).

Noel Paul's Brook sites We were able to locate three sites around the mouth of this river and were later informed that we had missed two more further west. Noel Paul's Brook 1 is a large single housepit well inland but only 30-70 m distant from fine views of the Exploits and its north and south shores, and therefore well situated for observing caribou movements. Much of the housepit description in an earlier section of this paper (pp. 163-4)

applies to this site: further details can be found in the full report (Thomson 1983). The house is situated 3 m above the river in a small clearing. The trees between the house and the river would have served several purposes: to shield the camp from the worst of the winter weather, and to disguise its presence from caribou and, possibly, Europeans, although it is unlikely that many of the latter ventured this far inland.

A test trench run from the centre through the east wall produced undisturbed stratigraphic details, organic artifacts and subsistence evidence. The upper 2-8 cm consisted of moss, leaves and humus and was quite sterile. Below this, 8-15 cm of orange sand contained cultural material; this sand layer, most likely river silt, continues for at least another 20 cm. It was relatively easy to follow the contours of the house, from hearth through sleeping hollow to the outside wall and beyond. While no stratigraphic proof of multiple occupation was noted in this or any other housepit tested, nor did we find overlapping houses and internal features or any other indication which might suggest that new houses were built each year. It is likely that, having once gone to the trouble of digging a house foundation and cutting poles, the same structure would continue to be re-occupied.

Noel Paul's Brook 2 is a new site and consisted of four housepits laid in a linear fashion away from the river. The closest to the river is by far the largest of the four at 8 m, suggesting some form of social stratification. Other explanations for this anomaly could include a larger-than-average family group, a different period of occupation and housing style, improved or more abundant construction tools and other therories; yet for optimum harvesting of caribou utilizing fences reportedly up to 2 km in length (Howley 1915), several families would be more efficient than one or two, and a hunting leader would probably be required to keep order. It might be expected, then, that the leader would display some trappings of higher status, including a larger house.

Noel Paul's Brook 3 is another new site, the only one in which we found any prehistoric material. Our attention was drawn to the site by a surface scattering of blue-grey chert flakes. The clearing had been thoroughly scoured by an artifact collector who had left the flakes and large mounds of disturbed soil. Our testing of the remaining undisturbed portion of the 40 m^2 site revealed a chert biface tip similar to those found in Recent Indian sites in Notre Dame Bay (Ralph Pastore 1982: personal communication), and three boulders

which may have formed part of a habitation structure. No structure was visible from the surface. The presence of evidence of prehistoric Indians this far inland was not a surprise in view of the prehistoric sites at Red Indian Lake (Devereux 1970; Sproull-Thomson 1982), but the fact that the evidence was found, in the absence of habitation structures or other recognisable features, in heavily vegetated country was most surprising. In retrospect, it appears that a thorough search of the Exploits environs, including random test pitting, might indeed produce results.

Red Indian Falls sites This group of six discrete sites lies on the bank of the Exploits east of Noel Paul's Brook and totals twenty-five housepits in groups of from three to six. In contrast, in his 1768 map, Cartwright illustrates only five wigwams in this stretch of the river (Howley 1915), perhaps indicating that the housepits pre -date his journey. Most of the houses are between 4 and 7 m in diameter and several of the sites are now so close to the water that they are being eroded.

Red Indian Falls 1 (RIF) is comprised of three housepits aligned parallel to the river some 3 m above the water (a.r.l.), in a mixed stand of birch and spruce. A small spring rises to the west and the bank rises steeply to 30 m immediately behind the site. Two of the houses are quite shallow and overgrown, each has an anvil stone, a raised hearth, and sleeping hollows inside. Test pits yielded bone, burned bone, charcoal and two fragments of iron from the vicinity of one of the anvil stones: one was a long thin piece resembling an arrowhead shaft, the other a bent square-shafted nail. House 3 was deeper than the other two at 49 cm below the wall crest, more substantial looking, and 7 m in diameter. Test pits in this house produced considerable amounts of the same cultural material as the other two, including the head of a large spike and a sherd from an iron pot. As no previous test pits were evident, this may be a new site and, judging from the extent of cultural material and its preservation, would be a worthwhile site for further investigation.

RIF 2 is located at the top of a steep bank, some 30 m a.r.l. Five housepits are clustered together in a stand of dead birch. Four of the housepits measure between 4 and 6 m in diameter and up to 40 cm in depth. Bone, calcined bone and charcoal were abundant in most of the test pits. Hearths, sleeping hollows and, in one case a doorway, were plainly visible. The fifth structure was substantially larger at 8 m in width and

one metre in depth. Internal features were again easily discernible and an apparent doorway opened to the southeast. Two anvil stones were present; a test pit beside one produced a small piece of iron. This site would have been situated so high above the river in order to manage construction and tending of a caribou fence set along the edge of the steep bluff.

We were unable to find Locke's RIF 3. It is possible that the six housepits described for this site have been eroded by the river or buried beneath the product of logging activities.

RIF 4 is located only 5-10 m from the river bank and may already have been reduced in size by riverine erosion. The three houses each measure about 6 m in diameter; test pits produced cultural material to an unusual depth of 17 cm.

RIF 5 is a linear group of four housepits all located within 2 m of the river bank; one of the structures has already lost half of its interior to the river. In addition, the site has suffered extensive damage by artifact hunters. House sizes range from 6.5 m to 4.5 m. The two smaller structures do not contain any obvious internal features while the larger two have plainly visible sleeping hollows and hearths. Fragments of badly corroded iron were found in one of the bigger houses.

The site we called RIF 6 was not recorded by Locke. Five circular depressions resembling housepits in shape, size, situation and grouping are located very close to the river bank and only 2 m a.r.l. They are all waterlogged, if not flooded, do not appear to contain any internal features, and seemed devoid of cultural material. It is almost certainly a Beothuk site but would benefit from a lengthy period of drought prior to further investigation.

Badger area sites We examined five sites in the vicinity of the town of Badger: three on Two Mile Island, west of town, one in Badger itself, and one on Slaughter Island, east of town. This area has suffered considerable damage from flooding, development, logging, erosion and looting but may still have some potential for investigation.

Two Mile Island Two Mile Island 1 is located on a regularly flooded clearing. Four shallow housepits were discernible in tangled brush; test pits in each produced small amounts of charcoal and bone and, in one case, a fragment of iron. This site gave us the impression of having been severely

damaged by flood action; soil was thin, depressions shallow or non-existent and cultural material sparse.

Two Mile Island 2 consists of a single large housepit in a healthy stand of birch and spruce. A raised central hearth, sleeping hollows and two anvil stones were present in the interior; test pits yielded large quantities of bone and charcoal. This is a new, undisturbed site; at 4 m a.r.l. it seems safe from river damage.

A jumble of rocks resembling a grave or perhaps a cache is tentatively called Two Mile Island 3. Although not recorded previously, this possible site has suffered some disturbance, with flat slabs moved out of position and charcoal scattered around the structure.

A fourth site, described by Locke (personal communication), was not found and may have been lost to the river.

Pope's Point, a mixed historic and prehistoric site investigated in 1964 by Helen Devereux (1965), occupies one corner of the confluence of Badger Brook and the Exploits. The site has suffered from many forms of disturbance but test pits revealed that some cultural material remains in situ. Much of the site now supports Forestry Department buildings, preventing both extensive investigation and looting.

The site on Slaughter Island, just below Badger, consists of one small housepit and a cachepit. The house has been extensively dug over in the past; test pits produced only charcoal and some calcined bone.

In early spring of 1983 the Exploits rose several metres above its normal level because of heavy ice jams below Badger, causing extensive damage by flooding, ice rafting and erosion. It can be expected that some of the sites mentioned above and any others not discovered in this area were disturbed. Cartwright shows a long caribou fence on the south shore opposite Badger; while we were unable to find a site along this bank it is rumoured locally that Indian axeheads have been retrieved, using metal detectors.

Grand Falls area sites The stretch of river between Badger and Grand Falls shows signs of regular flooding, especially nearer the dam at Grand Falls. Some sites have been permanently inundated, others covered by logging-related development.

The site at North Angle has been particularly hard-hit by these processes. Of the 27 housepits recorded by Locke we were able to find only the remanants of six. Of these, two are partially buried by a new gravel

embankment. All six yielded bone and charcoal in test pits.

Three sites were found on Aspen Island, some 7 km above Grand Falls. Here again, flooding has severely reduced the number of housepits recorded by Locke (n.d.). The whole island has also been recently logged over and at the time of the survey was covered in a deep litter of cut brush, boughs, windfalls and stacks of pulp logs, making normal survey techniques difficult. Aspen Island 1 consists only of two deposits of caribou bone. No structures were visible. At Aspen Island 2, where Locke had recorded eight housepits and one longhouse, we were able to find three pits with normal Beothuk contents but abnormal construction materials. The walls were constructed of heaped rocks rather than banked earth as in the usual Beothuk fashion. Rock lined hearths were also present. It is possible that these houses were modified at some later time but the size, presence of sleeping hollows and organic debitage certainly ascribe original Beothuk affiliation to this site. Aspen Island 3 is a single, shallow, 4 m housepit well back from the present bank, hidden in dense brush. Charcoal and bone were found in test pits, to a depth of 15 cm.

The South Exploits site, near Aspen Island, is described by Locke (personal communication) as containing both Dorset Eskimo and Indian material. Regrettably, we were unable to locate this most interesting site and have to assume that it too lies beneath present water level.

Similarly, Locke told us of several housepits on the islands in Nimrod's Pool, just west of Aspen Island, bordered by North Angle. That flooding has occurred in this region in the last decade or so is plainly shown by the fact that islands shown on the topographic map are now partially or completely submerged. We were unable to find any surviving housepits.

The former density of sites in the few kilometres above Grand Falls and the abundance of caribou bone in the housepits tested stressed the importance of this area as a caribou interception zone. It is regrettable that so many of the sites have suffered at least temporary disappearance.

We were unable to continue with the survey beyond Grand Falls due to time constraints and transportation difficulties. We were informed locally that the stretch of river between Grand Falls and the Bay of Exploits is subject to regular flooding due to dam control and ice jams. This information

was supported by the tremendous flooding earlier this year which removed a power house, several houses and parts of the bank in Bishops Falls, and diverted the course of the river. It is unlikely that many of the sites shown on the Cartwright map below Grand Falls (Howley 1915) have survived.

CONCLUSIONS AND RECOMMENDATIONS

During the course of our three week survey we covered more than two thirds of the length of the Exploits by canoe and slogged through countless kilometres of tangled brush. We located, tested and recorded eighteen sites, including five new ones. We examined a total of forty housepits between Noel Paul's Brook and Grand Falls and, for a variety of reasons, were unable to find some fifty more recorded previously by Locke (personal communication). This brings to twenty-five the number of known single-component and mixed sites between Red Indian Lake and Grand Falls, including Beothuk, Recent Indian and Dorset, and well over one hundred and ten individual structures.

In almost all cases sites along the Exploits consist of several housepits. While contemporaneity might logically be assumed for housepits within a site because of the advantage gained by cooperative management of caribou fences, no archaeological proof was found and future work should be directed at this problem. Buchan and Peyton are quoted in Howley (1915: 77, 93 respectively) as encountering groups of three occupied wigwams in the early 19th century. It seems reasonable to assume that this pattern was extant during the period(s) of occupation represented by the surveyed sites.

The regular spacing between major groups of sites indicates that there may have been close communication among the many families who left the Bay of Exploits and other parts of Notre Dame Bay for the winter caribou hunt. If all of the major caribou crossings were monitored simultaneously, chances of a successful harvest for what may have been a single large band would be greatly increased (cf. Howley 1915: 37).

In retrospect, our survey might have had a greater degree of success had we adhered to the original plan of completely covering both banks of the Exploits, its islands, and the tributary mouths. That we found one prehistoric site without any visible structural features suggests that random test pitting in caribou crossing areas might produce additional Recent Indian evidence. Because of the vague nature of Cartwright's sketch map we were unable to find many of the housepits illustrated. However, a more intensive search in these approximate locations might be successful. It is locally rumoured that the Exploits and Red Indian Lake may soon be phased

out as log transportation corridors in favour of overland routes to the pulp mills. If this should happen and the water levels are permitted to return to their natural height, some of the now-inundated sites where water and ice scouring have been mimimal might re-appear in a condition meriting some degree of investigation.

The following list of recommendations arose from this survey and subsequent reflection. The thoughts are my own and do not imply policy or planning of the Historic Resources Division, the publisher of this paper.

1. The water level in Nimrod's Pool and on the Exploits below Grand Falls should be closely monitored. If it falls by by a metre or two below its present level some of the now-submerged sites might become available for study, although it is likely that considerable damage would have been caused by water, silt, logs and ice.

2. There is an urgent need for public and corporate education on archaeological resource protection in the province in order to reduce damage and outright destruction. Several of the sites documented had been savagely dug over by persons in search of artifacts, others had been more methodically but still illegally tested; some had been subjected to search by people with metal detectors; and many had been disturbed by logging, road and building construction, dam-raising and control, and accelerated riverine erosion. Realization of the damage caused to cultural resources might result in increased cooperation and a resultant decline in site attrition.

3. My comments above notwithstanding, some sites along the Exploits are apparently too close to habitation centres or highways to be adequately protected and might be completely excavated and sacrificed as interpretation centres.

4. The Exploits River could be developed, publicised, and supported as a canoe trail by the Tourist Division, in cooperation with the Historic Resources Division. It is an ideal river for novice canoe travel, offering a serene and picturesque passage for most of its length, interspersed with occasional rapids of varying degrees of difficulty almost all of which can be traversed or easily portaged. Such a trail might be made more interesting if accompanied by a written history of utilization of the Exploits valley by aboriginal peoples and logging interests. Added attractions could include a revitalized Beothuk Village along similar lines to that created by Don Locke and his family; increased ease of canoe access to Provincial Parks such as Mary March, Aspen Brook, and Beothuk and the creation of new overnight camping areas in locations such as Millertown, Noel Paul's Brook and Bishop Falls; posted po tage routes at rapids; a terminus at or route around Grand Falls and Bishops Falls, complete with telephone connections with a taxi company willing to carry roof racks; and a terminus with facilities at Rattling Brook. Alternatively, of course, the river could be left in its present state as a wilderness route.

5. Following a conversation with Mrs. Douglas Woodman of Millertown and judging by the decline in logging activity in the Millertown area, it would seem advisable to commence immediately a collection of oral, written, photographic and artifactual memorabilia of the logging industry in this region. Such a project might eventually result in a permanent museum collection which would act as a tourist draw and would certainly be a fitting tribute to the founders of Millertown.

ACKNOWLEDGEMENTS

My thanks must go to several persons and agencies for help with this project: Dr. Ralph Pastore of Memorial University's History Department and the Department of Culture, Recreation and Youth's Historic Resources Division for funding and logistically supporting this project, and the latter agency for granting the research permit; the people of Millertown for their kind hospitality and interest, especially the Woodmans, Hayward White and Mrs. Hoffe; Todd Paul of Badger for enthusiastic help; the staff of the Beothuk Provincial Park forungrudging assistance; the James family of Grand Falls for their hospitality and fund of information and ideas; Don Locke of Grand Falls for so generously sharing information, theories and site locations (all, I hope, acknowledged in this paper and/or the full report); and a tireless, cheerful companion, Gary Baikie, whose facial transition from terror to disbelief to pride as we came accidentally but safely through our first set of rapids I will never forget.

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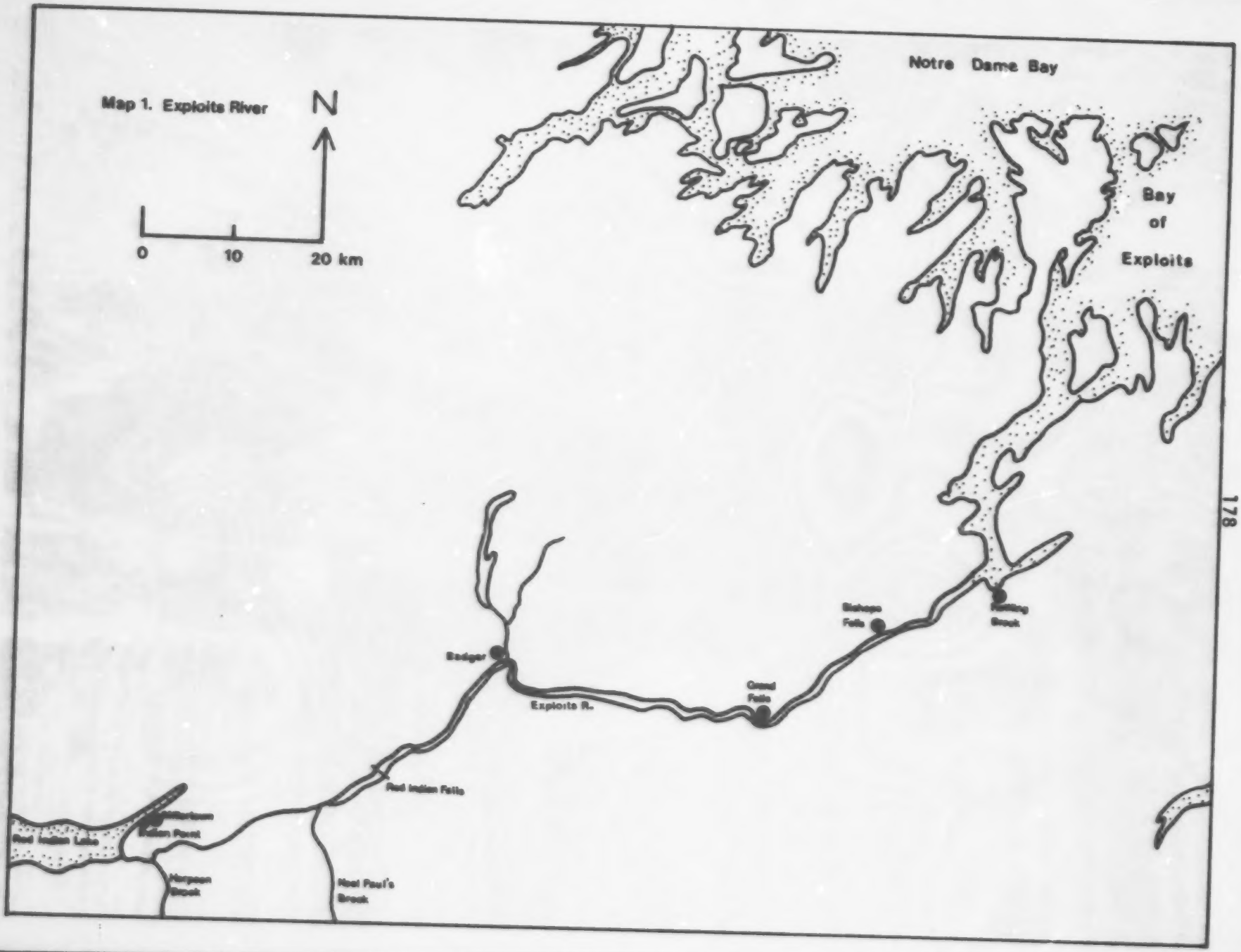
PLATE 1

Test trench from hearth through outer wall of Beothuk housepit, Noel Paul's Brook 1.


Map 1. Exploits River
N
0
10
20 km
Notre Dame Bay
Bay of Exploits
Badger
Exploits R.
Grand Falls
Red Indian Falls
Red Indian Lake
Red Paul's Brook

BURNT KNAPS: (DbAv-1,2) TWO MICMAC SITES ON MIDDLE RIDGE

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INTRODUCTION

The Burnt Knaps II site was shown to the author by Mr. Nicholas Jeddore of Conne River. Mr. Jeddore, now 78 years old, first visited the already-abandoned site around the turn of the century, as a boy in the company of his father. Information concerning the Burnt Knaps I site was gleaned from Mr. Melvin Jeddore just prior to our departure for Middle Ridge in May, 1982. Neither individual knew of the presence of two sites on the knap (Map 1). A knap is defined by Story et al. (1982:287) as being "a raised portion of land, often with a round top; crest of a hill".

Burnt Knaps is located approximately 53 km northeast of Conne River on the southwestern end of Middle Ridge. The ridge runs in a southwest-northeast direction for a distance of approximately 40 km. The granite ridge, which has an elevation of 250-300 m above sea level, divides the water systems of the area. The Northwest and the Southwest Gander River drains the area to the north, the Bay du Nord River system is to the south and the Terra Nova River flows to the east. The ridge is heavily wooded in places, in stark contrast to the low relief land to the east which is characterized by numerous ponds, bogs and stony hills (Map 2).

EXCAVATIONS

Excavation of the two sites was conducted during the period May 16 to June 12, 1982, by a crew of three from Memorial University.

Burnt Knaps I. The site, reported by Melvin Jeddore, is situated on the southeast side of the knap, elevated approximately 40 m from the open muskeg at its base. As found, the site consisted of a rectangular cleared area measuring 20 x 10 m. The area is surrounded by large black spruce trees, many now dead from hemlock looper devastation during the 1960s. Vegetation consisted of sphagnum mosses and grasses. The outline of a structural feature was dimly visible in the ground, with grasses inside the feature more colourful than those outside.

A green glass liquor bottle, a caribou skull with cut marks, and parts of the lower leg and foot bones of a caribou were found on the surface. The northeast quadrant of the established grid system was excavated (Plate 1). The area outside the structure was excavated in two metre squares, while one metre units were utilized inside the structure.

Burnt Knaps II. This site is located on the northern side of the knap. A small pond is located near its base. The site is entered by a footpath from the west. The cleared area, with vegetation similar to that on the Burnt Knaps I site, measured approximately 25 x 20 m. Several large black spruce windfalls covered most of the site. Two features in the northwest quadrant of the established grid were excavated. The first feature, a bone midden (Plate 2), was test-excavated in 1981; an additional 12 m^2 were excavated this season. The other feature, a hearth, is located to the north where 16 m^2 were excavated (Plate 3).

Although no structural features were observable prior to excavation, the surface at the Burnt Knaps II site yielded caribou bones and antler, wire strapping, a fragmented pottery bottle and a large, iron pot. The informant remembers the latter being suspended from a tree when he visited the site at the turn of the century.

Neither the Burnt Knaps I nor the Burnt Knaps II site was deep, except at hearth areas; average depth ranged from 10 - 15 cm below the sod zone.

ARTIFACTS

The most numerous cultural remains found at both sites were mammal bones. At the Burnt Knaps I site 815 bones weighing 4.09 kg were found. The bone midden at Burnt Knaps II contained 17.76 kg of bone, while the hearth contained a further 3.70 kg. Calcined bone in the midden weighed 0.2 kg and in the hearth 0.83 kg. The total number of bones at the Burnt Knaps II site was 2269. As the bone was excavated it was cleaned and marked by site and provenience. Fragments were bagged by square and further labelled in the laboratory prior to shipment. All faunal material was submitted to the Zooarchaeological Identification Centre of the National Museum of Natural Sciences in Ottawa for analysis.

European manufactured artifacts found at both sites totalled 308. At the Burnt Knaps I site 136 artifacts were excavated while 172 were recovered from the Burnt Knaps II site; 23 from the bone midden and 149 from the hearth. Concentrations of such items as lead shot and glass sherds were often pooled for catalogue purposes which resulted in a lower number of artifacts than that actually recovered. Artifacts from both sites are described under the following categories.

Burnt Knaps I

Hunting and Trapping. The archaeological remains of these activities included such items as a beaver trap base and one unidentified trap part, one whetstone and three knife parts, one of which is from a pocket knife, a nearly complete 22 mm wide flat file, and the male end of a half - round rat-tail file, and two file fragments. Hunting activity is demonstrated by four spent .22 calibre shell casings which, from the firing pin imprint, appear to have all been fired from the same rifle; one .45 - .70 calibre shell casing with initials W.R.A.; and one 12-guage shell casing labelled U.M.C. Co. "New Club".

Nine lead sprue clusters were found in the vicinity of the hearth. One round 18 mm lead ball, two semicircular 17 mm lead slugs and two expended slugs were also recovered. Approximately a hundred 4.5 - 5.0 mm lead shot, two 10 mm lead balls and two 7 mm lead balls were found inside the structure.

Tobacco Markers And Buttons. Seven buttons were recovered from the site: a wooden button, three metal buttons marked "Our Own Make", and three other buttons of similar shape. A tobacco marker bearing the message "Home Rule" was also recovered.

Nails. Thirty-one wire nails ranging in size from 4 inch (3), to 2½ inch (10) to 1½ inch (14) to 1 inch (2), were recovered as well as two fragments. Sixteen cut nails ranging in size from 4 inch (1), to 3 inch (4), to 2 inch (2), to 1½ inch (4), and five fragments were also recovered.

Glass. A complete green glass liquor bottle was found on the surface. A green glass case bottle bearing the Dutch inscription (J. Hewson February 1983; personal communication): BLANKENHEYM & NOLET, and fragments of three other bottles, were found; two of the latter

appear to be for patent medicine including one Minard's Liniment container. A small clear glass bottle, missing the neck, has the appearance of a religious artifact. It is likely that the Dutch inscribed bottle came here via St. Pierre or Miquelon.

Miscellaneous Iron: Six lengths of wire were found each with a 4 mm diameter and one end fashioned into a hook, possibly for suspending pots over the hearth.

Four other pieces of 2 mm wire, again hooked shaped, were also found. Four fragments of 33 mm wide iron, two of which have multiple nail holes, appear to be fragments of sled runners. A tin tea kettle spout, handle, and ring as well as a dozen or so fragments of tin were also recovered.

Absent. Neither ceramic vessels nor clay pipes were found at the site.

Burnt Knaps II - Bone Midden

Hunting and Trapping. A beaver trap chain and jaw fragment, a pocket knife marked "Slash", and a rat-tail file fragment were found in the midden area.

Tobacco Markers and Buttons. Three tobacco markers labelled "Daisey", "Miner", and "Virginia Leaf" respectively, and a white pressed glass four-hole button were recovered.

Ceramics. A rim sherd and a body sherd of refined earthenware, which proved to be fragments from a vessel found in the hearth, was the only ceramic material recovered.

Nails. Eight cut nails ranging in size from 2½ inch (2), to 1½ inch (2), a 2½ inch felt nail and three 1½ inch brads were found.

Miscellaneous Iron. An iron rim sherd from the large pot which was found on the surface, a curved piece of 4 mm wire, a padlock part, one unidentified piece of iron and two tin fragments, one having a lead inner lining, were also recovered from the midden.

Burnt Knaps II - Hearth

Hunting and Trapping. Two beaver trap chains, one trap pan and two trap jaw fragments, as well as a circular ring possibly associated with trapping, were recovered along with three whetstones, a rat-tail file fragment and a knife blade fragment. Four hundred and five 4.5 - 5.0 mm lead shot were recovered from this area. Three clusters of sprue and a

flat unworked piece of lead attest to shot production near the hearth. A large percentage of the small shot have lead runs till adhering. Two 18 mm circular lead balls, two semi-circular slugs, four 8 mm shot, five spent slugs, and six spent brass percussion caps were also recovered. Eight brass 12-guage shotgun casings came from the hearth: three manufactured by "ELEY" of London, England, one made by Remington and the remainder were of uncertain manufacture.

Tobacco Markers and Buttons. Three tobacco decals were found: one with initials "J-D", another marked "Daisey" and a third having a "Home Rule" slogan; a fragmented kaolin pipe bowl and a portion of the stem were also found. Three metal buttons, one having "Our Own Make" as a slogan, and a wooden four-hole button were located.

Ceramics and Glass. A fragmented white glaze refined earthenware cup and a rim portion of a shallow cream color glaze refined earthenware vessel were found in the hearth area. A green glass case bottle and a fragmented liquor bottle were located just outside the hearth. A brown stoneware pottery bottle was found partially exposed on the surface.

Nails. Two fragments of a 4 inch wire nail, a 2½ inch wire, a 1½ inch wire, a 1 inch wire and a wire brad were found. Fifteen cut nails ranging in size from 2½ inch (1), to 2 inch (3), to 1½ inch (5), one with a felt head, two galvanized boat nails, one 2½ inch and one 2 inch, and four fragments of cut nails were also found. A flathead screwdriver bit and a 1½ inch wood screw were also located in the hearth area.

Miscellaneous Iron. Three circular pieces of iron, possibly part of the base of the large on-surface pot, two lengths of brass wire used for pot hanging, a serrated piece of iron, possibly part of a saw blade, two sled runner fragments, two tin covers for small containers and some tin fragments were recovered.

Miscellaneous. Two small fragments of boot leather with brass eyelets, and a small piece of sawn and cut antler were found.

Soil Samples. Large amounts of soil and charcoal were bagged from the hearth at the Burnt Knaps I and Burnt Knaps II sites. These, for the present, remain unanalyzed.

DISCUSSION

The two sites at Burnt Knaps date to the end of the 19th and the

beginning of the 20th century, ca. 1875 - 1925, with the Burnt Knaps II site being the older. Wire nails, which quickly gained popularity after initial manufacture in North America during the 1850's, are more common on the Burnt Knaps I site with 31 wire and 12 cut, than on the Burnt Knaps II site which had 6 wire and 23 cut nails. Moose, a species which was successfully introduced to the Island around the turn of this century, is absent at both sites and indicates an occupation terminus for the Burnt Knaps I site. According to Conne River informants, the first moose was killed near their community in 1938.

The caribou resources of Middle Ridge appear to have been the main reason for site location. Bergerud (1971: 16) has suggested that the eastern interior caribou herd numbered 10,500 in 1900. The eastern area includes the Bonavista and Burin Peninsulas as well as the Pot Hill herds. The accuracy of this estimate is, however, difficult to vertify.

Burnt Knaps I appears to have been a temporary site, and faunal data suggest that the main activity was primary butchering of caribou. Nicol (1982:34) observed that 88% of all caribou bone came from the head and other extremities which "suggests that the site may have functioned as a location for primary butchering and skinning out of the caribou carcass." Although two beaver trap parts were found at the site, a black bear was the only fur bearer faunally identified, and it is probable that this animal was shot rather than trapped. The absence of such domestic detritus as ceramic fragments tends to confirm the temporary nature of this site.

Burnt Knaps II was more permanently occupied, possibly by a family. There is faunal evidence of a more diversified food way with goose and duck supplementing caribou. Again fur bearing animal remains are low - in this case one arctic fox - which suggests caribou hunting as the main site activity. Nicol (1982:50) found evidence for secondary food processing demonstrated by bones from the good meat areas of the caribou carcass accounting for "27% of the identified caribou bone". In contrast, bones from good meat areas were not found at the Burnt Knaps I site.

The calcined bone sample from the midden and the hearth area at Burnt Knaps II weighed 1.03 kg while calcined bone was virtually

nonexistent at Burnt Knaps I. Such items as ceramics and boot leather at the former location suggest an air of permanence not found at the Burnt Knaps I site.

Occupation of both sites seems to have coincided with the spring and fall migration of caribou herds into and out of the area. The presence of sled runner fragments and gnawing marks on some bones seem to suggest occupation of both sites during periods when the ground was snow-covered. Caribou may have found the elevated Middle Ridge attractive during the winter when snow buried their food on the surrounding lowlands.

Features

Burnt Knaps I. The conical birch bark wigwam is thought to be the traditional house of the Micmac; however, I had heard references in Conne River to a tmoqta'wi'kn or a square wigwam. The excavation of the Burnt Knaps I site proved the archaeological confirmation of these stories.

The tmoqta'wi'kn is a hybrid between the traditional birch bark wigwam and a log house. It is constructed by first felling trees and trimming logs which are then built up horizontally in the form of a square. Wall height, according to informants, varies between three and five logs. Rafters extend from the ground, rest on top of the log wall, and meet at the apex. A hoop then gathers and secures the upper end of rafters. Strips of birch bark are then placed on the poles in traditional wigwam fashion. The ground space between the rafters and the log walls is insulated with mosses and boughs.

Two types of tmoqta'wi'kn are constructed by Conne River Micmacs: hunting and family. The hunting type varies in size from 8 x 8 to 10 x 10 feet, the latter being the dimension of the tmoqta'wi'kn at this site. The hunting type can accommodate 3 to 4 hunters. The dimensions of the traditional family tmoqta'wi'kn are currently unknown.

The tmoqta'wi'kn has a central fireplace which, from archaeological evidence, functioned without the use of fire stones. Smoke escapes through an apex opening. We were unable to determine the width of the doorway due to the discontinuity of the front ground log after less than a metre (Plate 4). No evidence of sleeping areas was found inside the structure; the only evidence of excavation was the fire pit depression. Informants indicate that the area along the walls of the structure was covered by boughs to form sleeping bunks.

The tmoqta'wi'kn appears to be a more permanent and better insulated structure than the birch bark wigwam. The origins of the structure are presently unknown, and await further investigation. Members of the Conne River Band constructed four tmoqta'wi'kn last fall, which are to be recorded this field season. It is regrettable that we did not excavate outside the log walls of this tmoqta'wi'kn in an attempt to locate post molds; however, time constraints and my poor understanding of its construction techniques at that time prevented further excavation.

Burnt Knaps II. A large charcoal-filled hearth, nearly two meters in diameter, was the dominant feature at this site. The hearth had a maximum depth of 21 cm after sod removal. The central part of the hearth consisted of dark brown clay, containing only scattered amounts of charcoal (Plate 3). This clay closely resembles the underlying sterile clay deposit and it may have resulted from digging and/or redigging the fire pit.

The clay deposit was bordered by charcoal concentrations containing both artifacts and calcined bone. No evidence of fire rock was observed in hearth construction. We were unable to find any indication of post molds or logs in the area surrounding the hearth. A few scattered pieces of rotting wood were found but they did not indicate a structural outline. The dimensions of the hearth are quite large when compared to the hearth found inside the tmoqta'wi'kn, which suggests that any covering structure may have been large, possibly a family tmoqta'wi'kn.

SUMMARY

The two sites of Middle Ridge were excavated in an attempt to gain a better understanding of the country life of Newfoundland Micmacs. The limited references to Micmacs in Bay d'Espoir during the 19th century describe only life styles observed in and and around Conne River. The few glimpses which we do have concerning life in the country were recorded by sportsmen/adventurers who employed Micmacs as guides.

Micmacs depended on the resources of the interior for subsistence and as such the country was a dominant aspect of their culture. Our knowledge of their way of life in the interior is severely limited by an absence of written accounts and by the considerable difficulty in locating any site in the interior after it has been abandoned for a few decades. The combination of information presented here, gathered

from the excavation of the two Burnt Knaps sites and oral accounts of country life, is an initial effort at cultural reconstruction.

ACKNOWLEDGEMENTS

My appreciation is expressed to the Conne River Indian Band Council and the Historic Resources Division, Department of Culture, Recreation and Youth, Government of Newfoundland and Labrador for funding the excavation, to Douglas Robbins and Fredrick Schwarz for field assistance, K.L. Gosse for drawings, Velma MacDonald for cataloguing, to Heather Nicol, Zooarchaeological Identification Centre for faunal analysis,[1] and to the late Chief of the Newfoundland Micmacs, William Joe, for his encouragement and friendship.

NOTE 1

A forthcoming paper by Penney and Nicol will offer more data and interpretation of site seasonality, harvesting and butchering techniques, and distribution of faunal remains.

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NEWFOUNDLAND
BAY ST GEORGE
BURNT
KNAPS
MOUNT
SYLVESTER
CONNE
RIVER
BURGEO
ISLANDS
PLACENTIA
BAY

MAP 1

NEWFOUNDLAND

Compass sketch of Long Harbor River and country between Middle Ridge & Fortune Bay

By J.G.MILLAIS 1907.

MAP 2

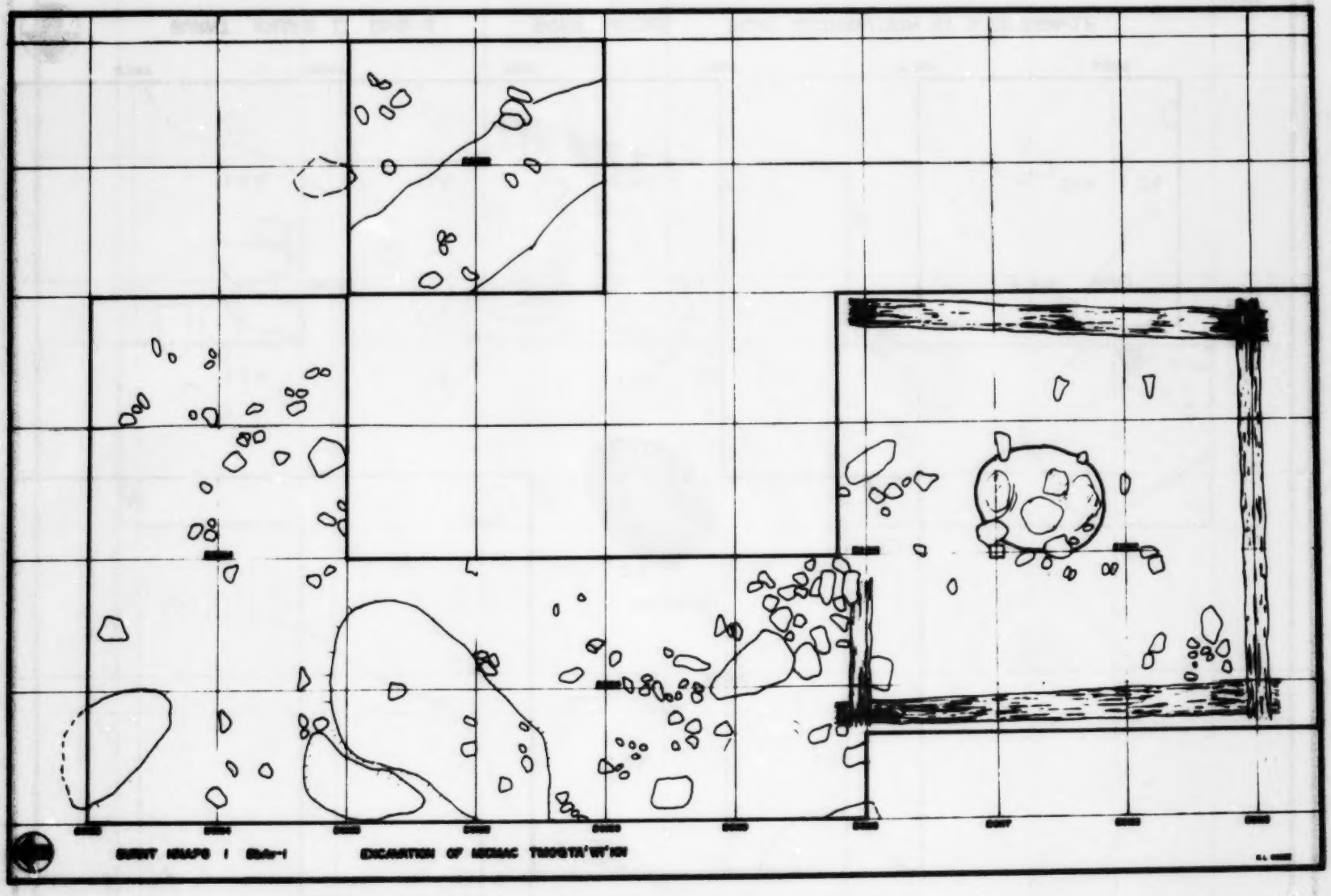

PLATE 1

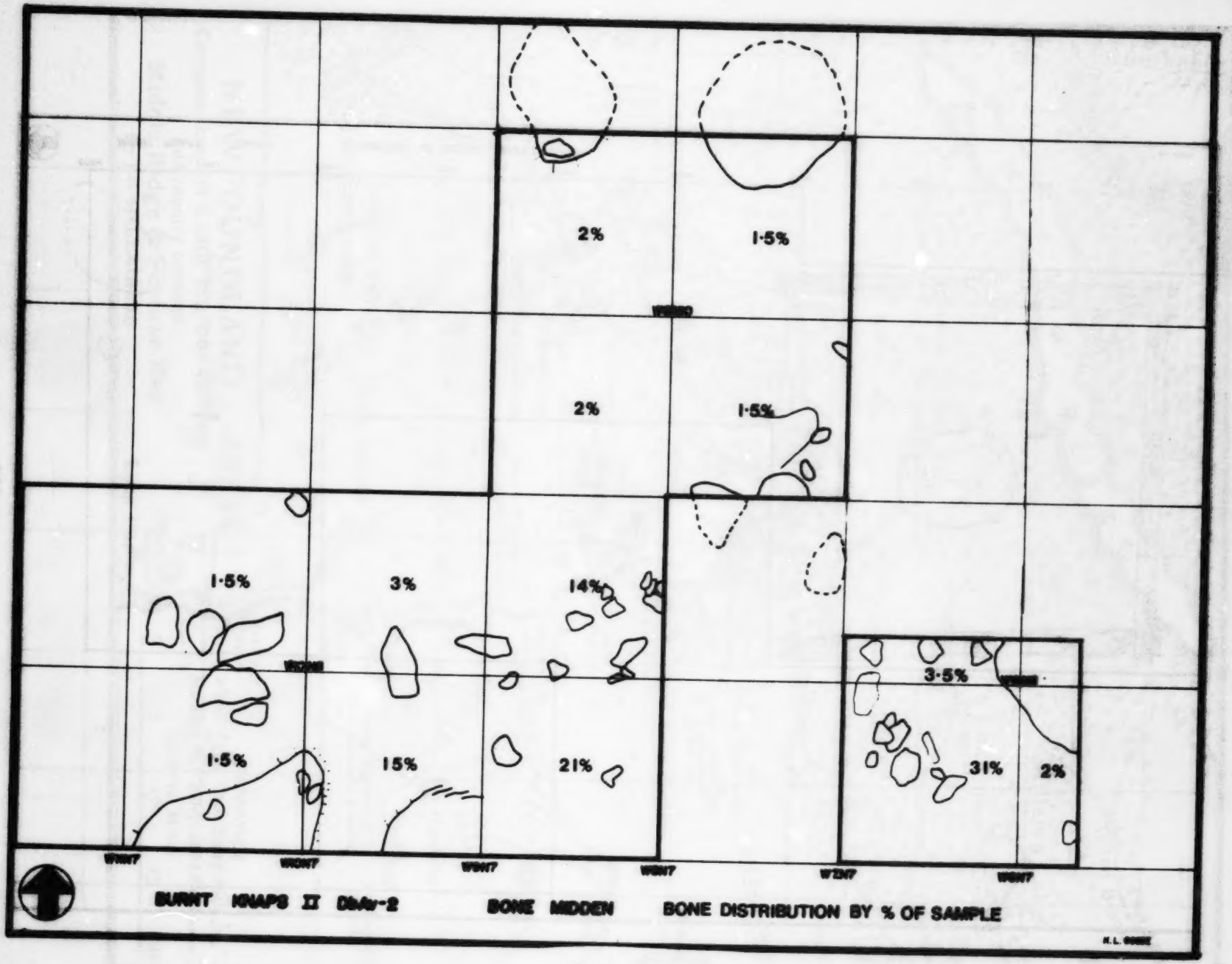
2%
1·5%
2%
1·5%
1·5%
3%
14%
3·5%
1·5%
15%
21%
31%
2%
W1N7
W2N7
BURNT KNAPS II DbAv-2
BONE MIDDEN
BONE DISTRIBUTION BY % OF SAMPLE

PLATE 2

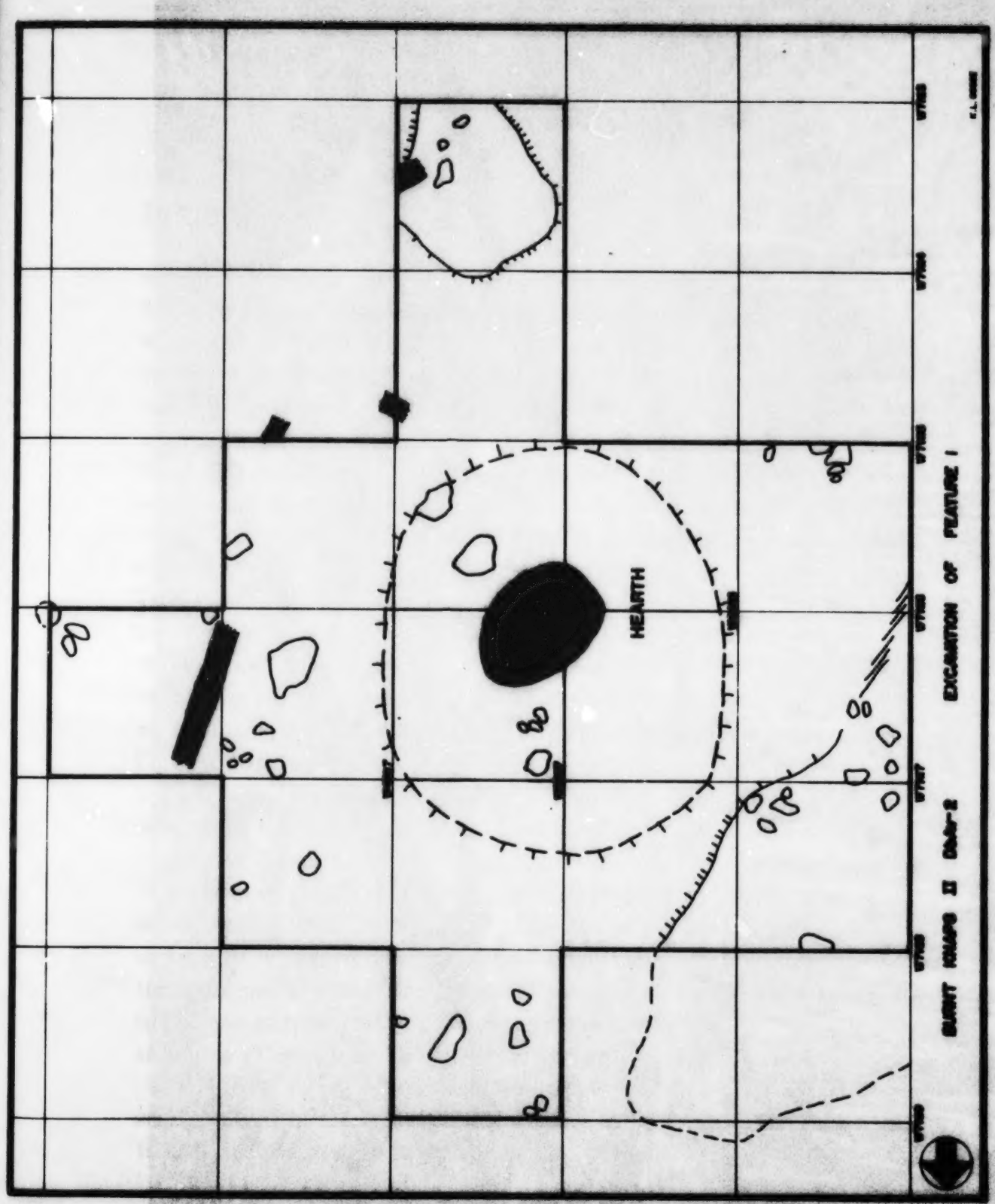

PLATE 3

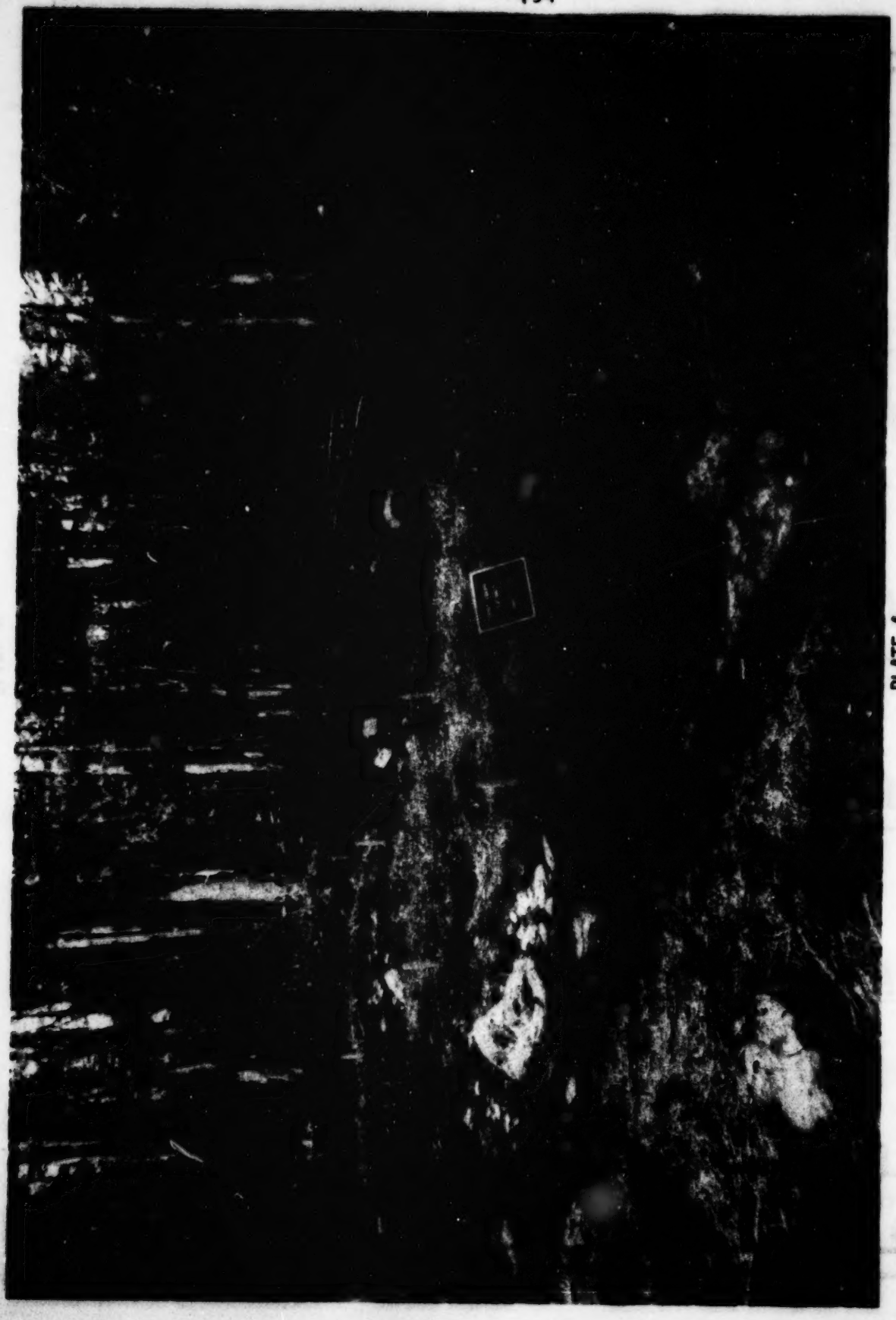

PLATE 4

A SURVEY OF UNDERWATER ARCHAEOLOGICAL SHIPWRECK SITES ON THE NEWFOUNDLAND COAST
II. THE BURIN PENINSULA AND THE ISLE-AUX-MORTS.

The Newfoundland Marine Archaeology Society

INTRODUCTION

In 1981 the Newfoundland Marine Archaeology Society (NMAS) did an extensive survey of shipwreck sites on the northeast coast and Northern Peninsula of Newfoundland in what was intended to be the first year of a multi-year operation (NMAS 1982). The second year of this undertaking had to be somewhat modified in 1982 due to the discovery of a potentially important shipwreck site off the Isle-aux-Morts. Consequently, two separate areas were surveyed by the NMAS in 1982, namely, the Isle-aux-Morts site, and several locations on the Burin Peninsula. These surveys were funded by a field grant from the Historic Resources Division, Department of Culture, Recreation and Youth. Ms. J.M. Barber was appointed as the Project Director for the Society and organized both expeditions.

ISLE-AUX-MORTS SURVEY

The wreck site off the Isle-aux-Morts on the southwest coast of Newfoundland came to the notice of the general public early in 1982, with reports in the media that Mr. Wayne Mushrow of Port-aux-Basques had found an astrolabe on a newly discovered shipwreck site. Mr. W. Mushrow, Mr. Lloyd Mushrow and Mr. Bob Bennett had been diving from Mr. Russell Harvey's boat in November, 1982, and had found a "cannon" site. They also found several intact ceramic artifacts, lead weights, pulley blocks from the rigging of a vessel, leather shoes, copper-based French coins dated "1638", as well as a solid, brass object, later identified as the astrolabe. This object, dated "1628", is believed to be the only astrolabe found on an underwater site in Canada. The only other astrolabe found in Canada was the one that belonged to Champlain. It was discovered on the land and is now in the United States. Besides the interest in the rarity of this find, the astrolabe and coins allowed the site to be approximately dated.

The NMAS survey took place from July 16 to July 18, 1982. Nine divers were involved in the project, most of them being from the west coast of the island, and two of them being original discoverers of the site.

It took between 20 to 30 minutes to take the diving crew in two boats to the site from the settlement of Isle-aux-Morts. The wreck lies in 10 m of water in an underwater gulch, only 24 m from the shore of the island. The ship's timbers were buried in coarse sand, which was only 0.05 m deep in places. It was estimated that timber, and other features of the site, extended over an area of approximately 800 m^2.

A 26 m baseline was laid along the timbers that were believed to be associated with the keelson of the vessel. The location of this baseline was surveyed from various land positions. Four iron cannons and four anchors were cleared of their covering of seaweed and a site plan of the major features was made (Fig. 1). In addition, Mr. L. Mushrow and Mr. W. Mushrow were able to locate the approximate positions of the artifacts which they had originally found.

A total of 21 hours, 34 minutes were spend underwater on 28 person dives. Besides the survey work, several leather shoes, a comb, a large deadeye, and staves and heads of barrels were noted. They were not raised, since they could not easily be conserved, and it would not have been possible to date them closely. A pewter tankard was also left concreted to a cannon. When visibility permitted, extensive use was made of underwater photography. One problem experienced on the site was that the bottom was easily disturbed, even by the diver's finning motion. Since there was little water movement in the underwater gulch, it sometimes took two hours before visibility would improve sufficiently to allow the divers to undertake survey measurements. Photographic sessions were thus limited to the first dive each morning. However, the water was warm, being over 10°C most of the time. Also, the depth of water allowed for almost limitless diving time.

The potential importance of this wreck is considerable. Many of the hull timbers and organic artifacts are in an excellent state of preservation, but the only way of analysing fully the extent of the wreck material will be when the overburden of sand is removed in a controlled manner. It is hoped that such an excavation can be made in 1983.

THE BURIN PENINSULA SURVEY

The southern side of the Burin Peninsula was selected to be surveyed for several reasons. Historical documents provided information on several potential shipwreck sites, or harbour areas of significance, in the Burin area. Information from Dave Walsh (Walsh 1980) indicated that cannon had

been found underwater, near to Mortier. In addition, the NMAS had not previously undertaken a survey in that area, and it was in keeping with the Society's intention to initiate such activities in all areas of Newfoundland and Labrador.

The expedition took place from July 27 to August 6, 1982, and was divided into two five-day sessions. Accommodation was secured for the period at Marystown. During the first five-day session, the Elsie G, a Cape Breton Islander, was used as a diving base. This allowed sites to be visited in the more open ocean conditions of Placentia Bay. During the second week two smaller boats: a 5.5 m long inflatable boat, and a local boat were utilized in more sheltered harbour areas. A total of twelve divers and support persons took part in the expedition. The locations visited can be seen in Fig. 2.

A. Tides Cove Point

HMS Placentia was wrecked on shore on a voyage from Merasheen to Burin, on May 8, 1794. The vessel was completely lost, although the Commander and crew managed to reach Tides Cove in the ship's boats (ADM 1/5331). This six gun, brig-sloop was of interest to the NMAS, since she was built in Newfoundland in 1790 by Jeffery and Street, Trinity Merchants (Colledge: 1969).

Fine weather allowed for two days of searching along the shoreline from Croney Island, around Tides Cove Point, to a position just north of Tides Cove (Fig. 3). Underwater visibility rarely exceeded 5 m and the boulder and pebble bottom was covered with extensive weed growth. A total of 10 hours, 23 minutes underwater time was spent by six divers. They worked in teams, and dove to the maximal depth of 18.5 m. No traces were seen of wreck material in the area. However, it was noted that the bottom was much disturbed by intense water movement, which must often be experienced along that exposed shore. It is possible that the gross features, such as guns and anchors, are buried under sand. In the circumstances, little of the hull or other parts of the vessel would remain.

B. Burin Harbours

Burin is known to have been used by Basque fishermen (Selma Barkham: pers. comm.). Later, in the 17th and early 18th century, French fishermen utilized the area, to be ousted by the English, who settled at Great Burin until this century. The Mary and Susannah, a merchant vessel, was burnt in Burin in 1791 (New Lloyd's List 1791).

Searches were made in Little Burin Harbour (8 hours, 16 minutes) and Great Burin Harbour (14 hours, 52 minutes) (Fig. 4). Underwater visibility was poor in both areas, sufficient to use buddy lines on some occasions. Little Burin Harbour, besides being the place for the present day fish plant with frequent trawler traffic, had a bottom that was covered in very thick silt. Nothing of significance was found, except for an anchor, although a few ceramics and other items were present. Great Burin Harbour contained several large anchors, a small boat filled with cement, and numerous artifacts near to the shore. It is usually the case that most of these items would appear to be around the ends of old wharves. Many 19th century English clay pipes, ceramics, and glass artifacts were sighted. The older items were of French origin. A few of the older ceramic artifacts were retrieved, including an intact grey stoneware jug, which is possibly of Basque or French origin.

C. Little St. Lawrence

On August 31, 1702, the Commander of HMS Medway sent a boat into Little St. Lawrence, and two French ships were burnt (ADM 51/591). This was part of the English offensive, under Commodore Leake, against the French in Newfoundland.

Lead line searches were undertaken to search systematically Little St. Lawrence Harbour. Underwater visibility was fair and the site was sheltered. The majority of the diving was undertaken in a maximum depth of water of 14 m. A total dive time of 15 hours, 23 minutes was spent in searching for two and a half days. No evidence of the remains of the two ships was found, although several anchors were noted. Comparatively few artifacts were located, even near to the shore. This confirms that minimal settlement has been experienced in recent times.

D. Mortier

Several cannons had been reported to have been found by divers at the foot of steep cliffs near to Mortier. Searches at this exposed location revealed the remains of three severely abraded iron cannon in 3 to 4.5 m of water (Fig. 3). The location was searched to a water depth of 21 m, but no shipwreck material was found. Each cannon was measured. Another iron cannon was found at the top of the cliff overlooking the site. It was similar to those found underwater. It is possible that the cannon found underwater were tipped over the cliff from gun placements, which were part of the land fortifications of the local merchants. Whether the site at Mortier is that of a shipwreck is therefore uncertain at this time. It should be recorded that a total of 8 hours, 23 minutes total diving time was spent on this site.

SUMMARY

Two new sites were surveyed. The one at the Isle-aux-Morts is believed to be the remains of a mid-seventeenth century French vessel. The other, at Mortier, is still unidentified and might not be the remains of a vessel. Several other locations were surveyed, but no new sites were found.

ACKNOWLEDGEMENTS

We would like to acknowledge the assistance of Mr. D. Barron, Mr. R. Clark, the Coast Guard personnel at Burin, the Newfoundland Institute for Cold Ocean Science, Mr. E. O'Reilly, Mr. G. Wiscombe and the Sea Horse Diving Club of Burin, the Manager and Staff of the Motel Mortier at Marystown, Woof Design, and Mr. R. Ficken for photographic assistance. Historical documentation was made possible through a Canada Council Explorations Programmes Grant No. 600-78-0063-4 to Ms. J.M. Barber.

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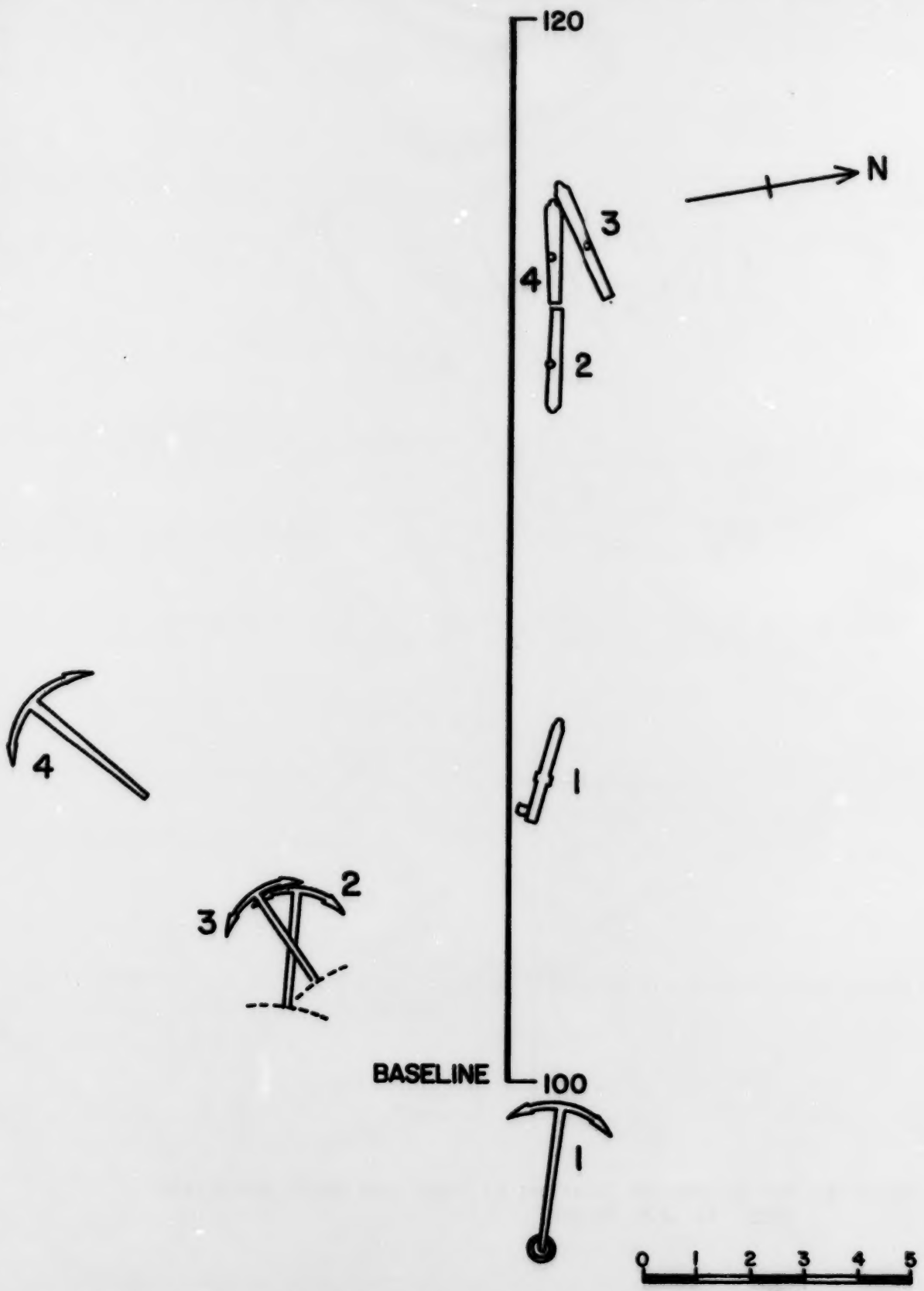

FIGURE 1. Site plan of the Isle-aux-Morts site. (Plan: Ms. J.M. Barber, redrawn by Woof Design.)

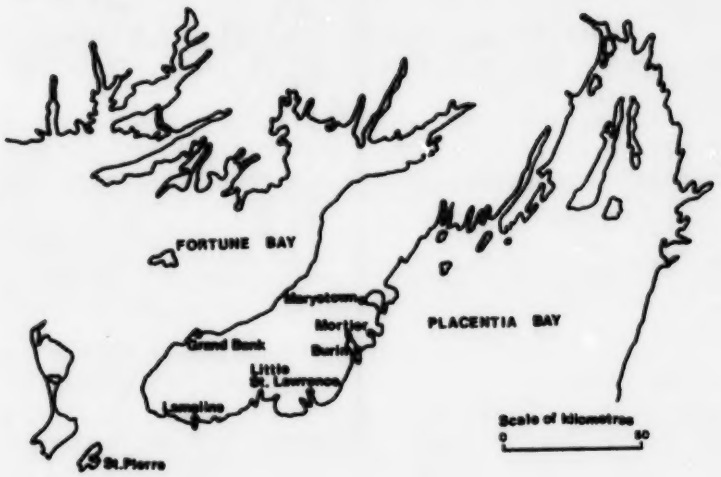

FIGURE 2. Map to show the locations of the sites referred to on the Burin Peninsula. (Map: Ms. J.M. Barber)

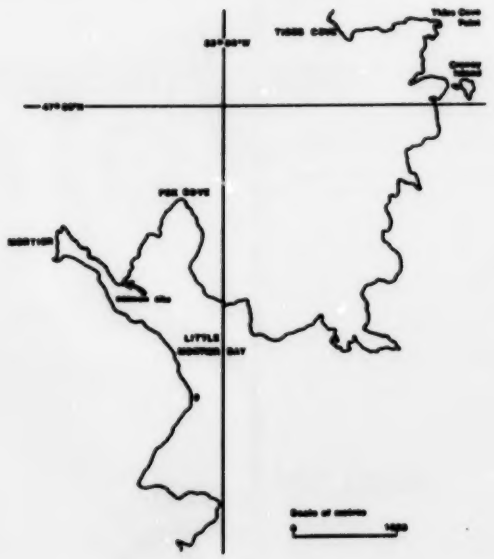

FIGURE 3. Map to show the locations of Tides Cove Point, and Mortier. (Map: Ms. J.M. Barber)

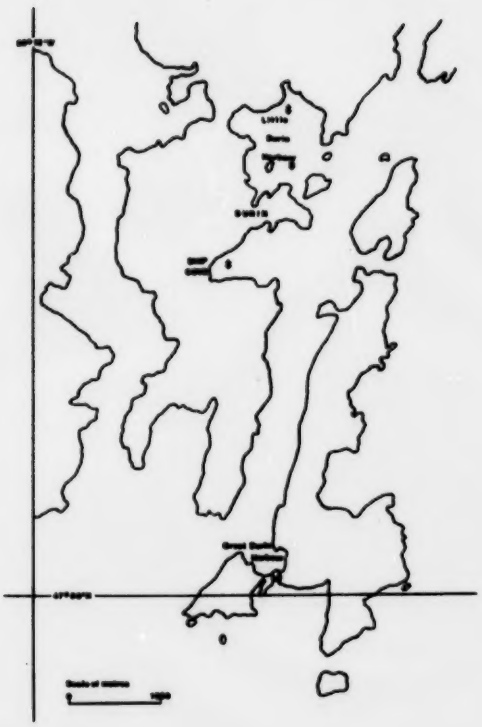

FIGURE 4. Map to show the locations of Little Burin and Great Burin Harbours. (Map: Ms. J.M. Barber)